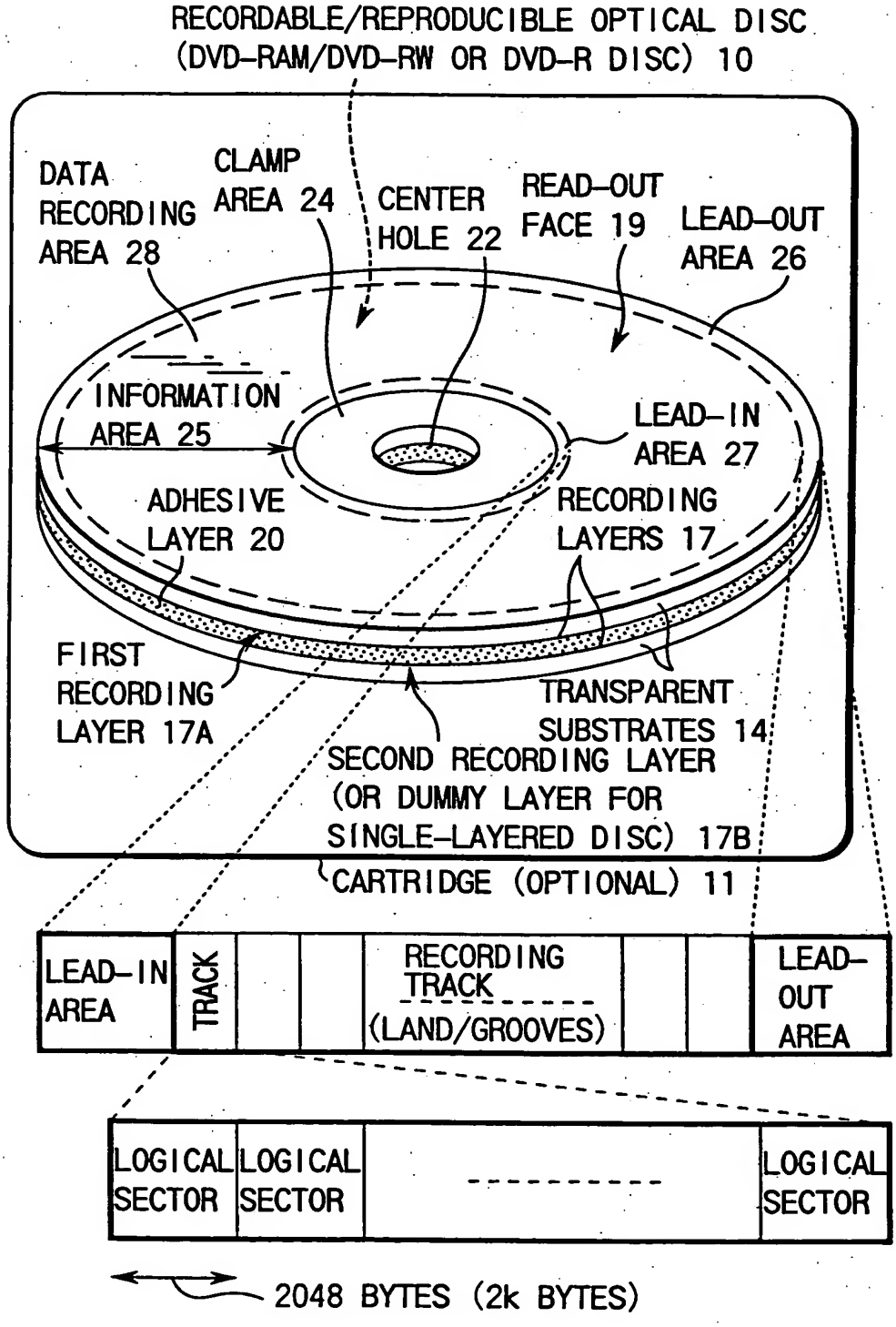

RECORDABLE/REPRODUCIBLE OPTICAL DISC
(DVD-RAM/DVD-RW OR DVD-R DISC) 10
DATA RECORDING AREA 28
CLAMP AREA 24
CENTER HOLE 22
READ-OUT FACE 19
LEAD-OUT AREA 26
INFORMATION AREA 25
LEAD-IN AREA 27
ADHESIVE LAYER 20
RECORDING LAYERS 17
FIRST RECORDING LAYER 17A
TRANSPARENT SUBSTRATES 14
SECOND RECORDING LAYER (OR DUMMY LAYER FOR SINGLE-LAYERED DISC) 17B
CARTRIDGE (OPTIONAL) 11
LEAD-IN AREA
TRACK
RECORDING TRACK
(LAND/GROOVES)
LEAD-OUT AREA
LOGICAL SECTOR
LOGICAL SECTOR
LOGICAL SECTOR
2048 BYTES (2k BYTES)

FIG. 1

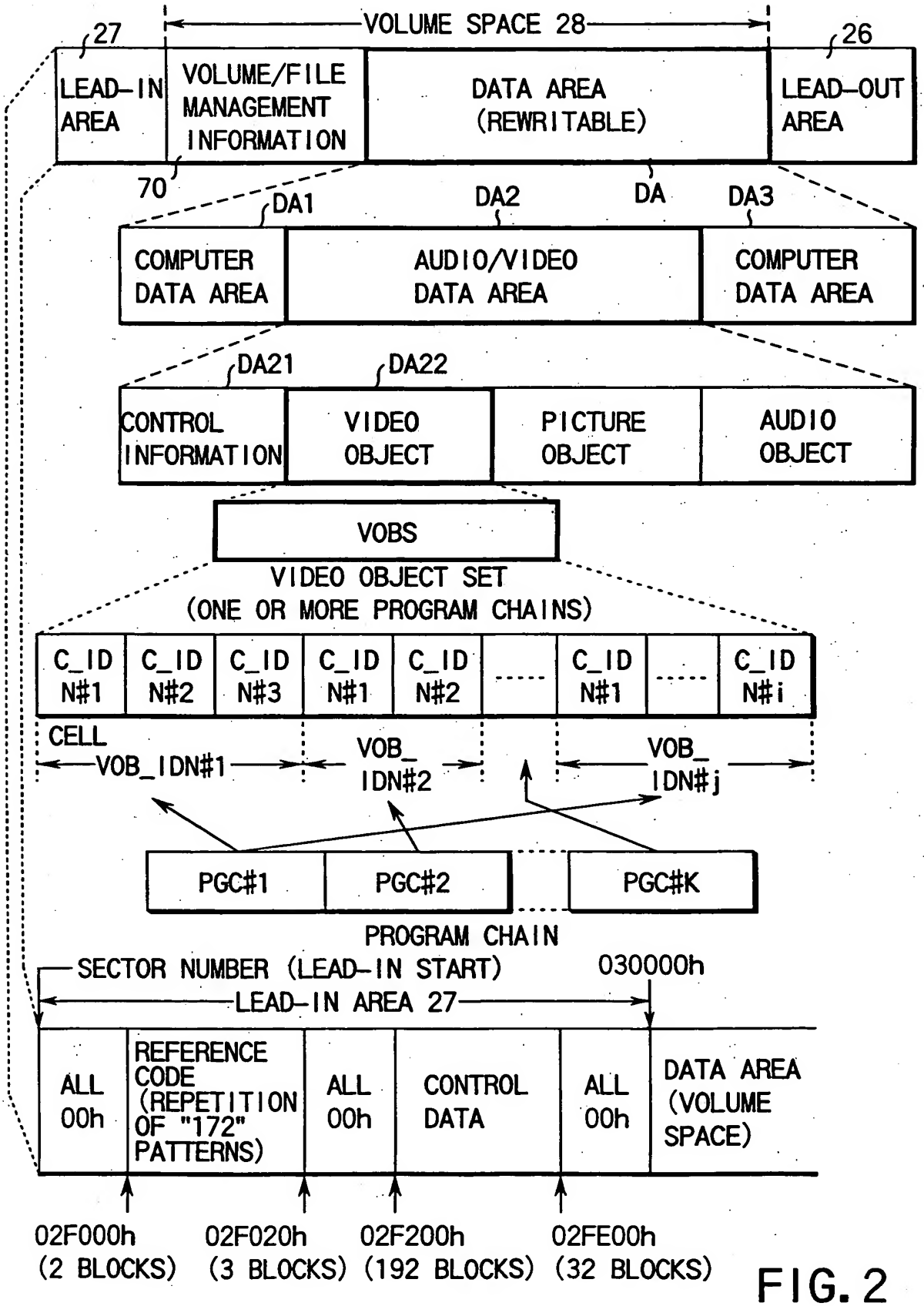

VOLUME SPACE 28
27
26
LEAD-IN AREA
VOLUME/FILE MANAGEMENT INFORMATION
DATA AREA (REWRITABLE)
LEAD-OUT AREA
70
DA1
DA2
DA
DA3
COMPUTER DATA AREA
AUDIO/VIDEO DATA AREA
COMPUTER DATA AREA
DA21
DA22
CONTROL INFORMATION
VIDEO OBJECT
PICTURE OBJECT
AUDIO OBJECT
VOBS
VIDEO OBJECT SET
(ONE OR MORE PROGRAM CHAINS)
C_ID N#1
C_ID N#2
C_ID N#3
C_ID N#1
C_ID N#2
C_ID N#1
C_ID N#i
CELL
VOB_IDN#1
VOB_IDN#2
VOB_IDN#j
PGC#1
PGC#2
PGC#K
PROGRAM CHAIN
SECTOR NUMBER (LEAD-IN START)
030000h
LEAD-IN AREA 27
ALL 00h
REFERENCE CODE (REPETITION OF "172" PATTERNS)
ALL 00h
CONTROL DATA
ALL 00h
DATA AREA (VOLUME SPACE)
02F000h (2 BLOCKS)
02F020h (3 BLOCKS)
02F200h (192 BLOCKS)
02FE00h (32 BLOCKS)

FIG. 2

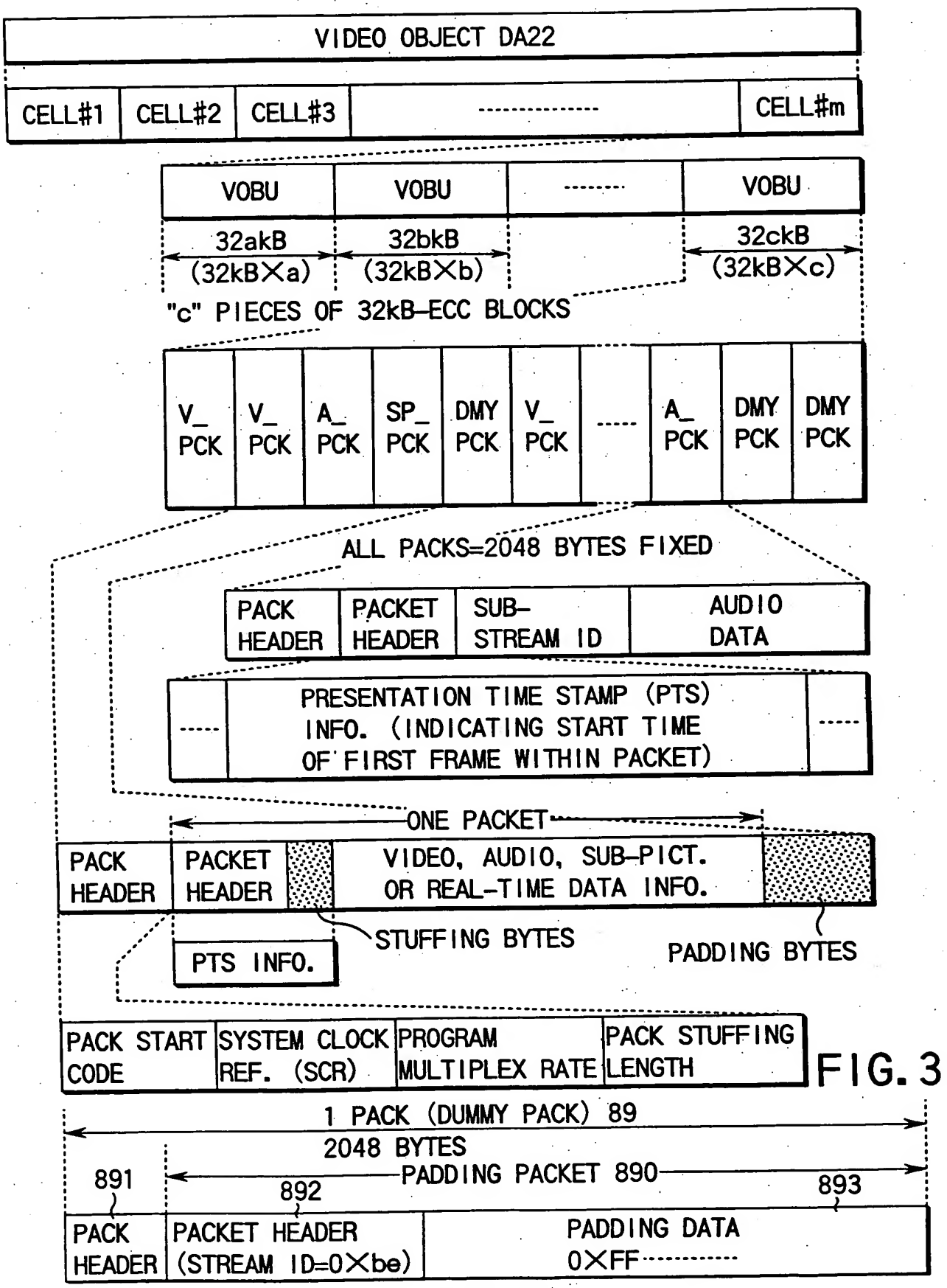

VIDEO OBJECT DA22
CELL#1
CELL#2
CELL#3
CELL#m
VOBU
VOBU
VOBU
32akB (32kB×a)
32bkB (32kB×b)
32ckB (32kB×c)
"c" PIECES OF 32kB-ECC BLOCKS
V_PCK
V_PCK
A_PCK
SP_PCK
DMY PCK
V_PCK
A_PCK
DMY PCK
DMY PCK
ALL PACKS=2048 BYTES FIXED
PACK HEADER
PACKET HEADER
SUB-STREAM ID
AUDIO DATA
PRESENTATION TIME STAMP (PTS) INFO. (INDICATING START TIME OF FIRST FRAME WITHIN PACKET)
ONE PACKET
PACK HEADER
PACKET HEADER
VIDEO, AUDIO, SUB-PICT. OR REAL-TIME DATA INFO.
STUFFING BYTES
PADDING BYTES
PTS INFO.
PACK START CODE
SYSTEM CLOCK REF. (SCR)
PROGRAM MULTIPLEX RATE
PACK STUFFING LENGTH
1 PACK (DUMMY PACK) 89
2048 BYTES
PADDING PACKET 890
891
892
893
PACK HEADER
PACKET HEADER (STREAM ID=0×be)
PADDING DATA 0×FF

FIG. 3

FIG. 4

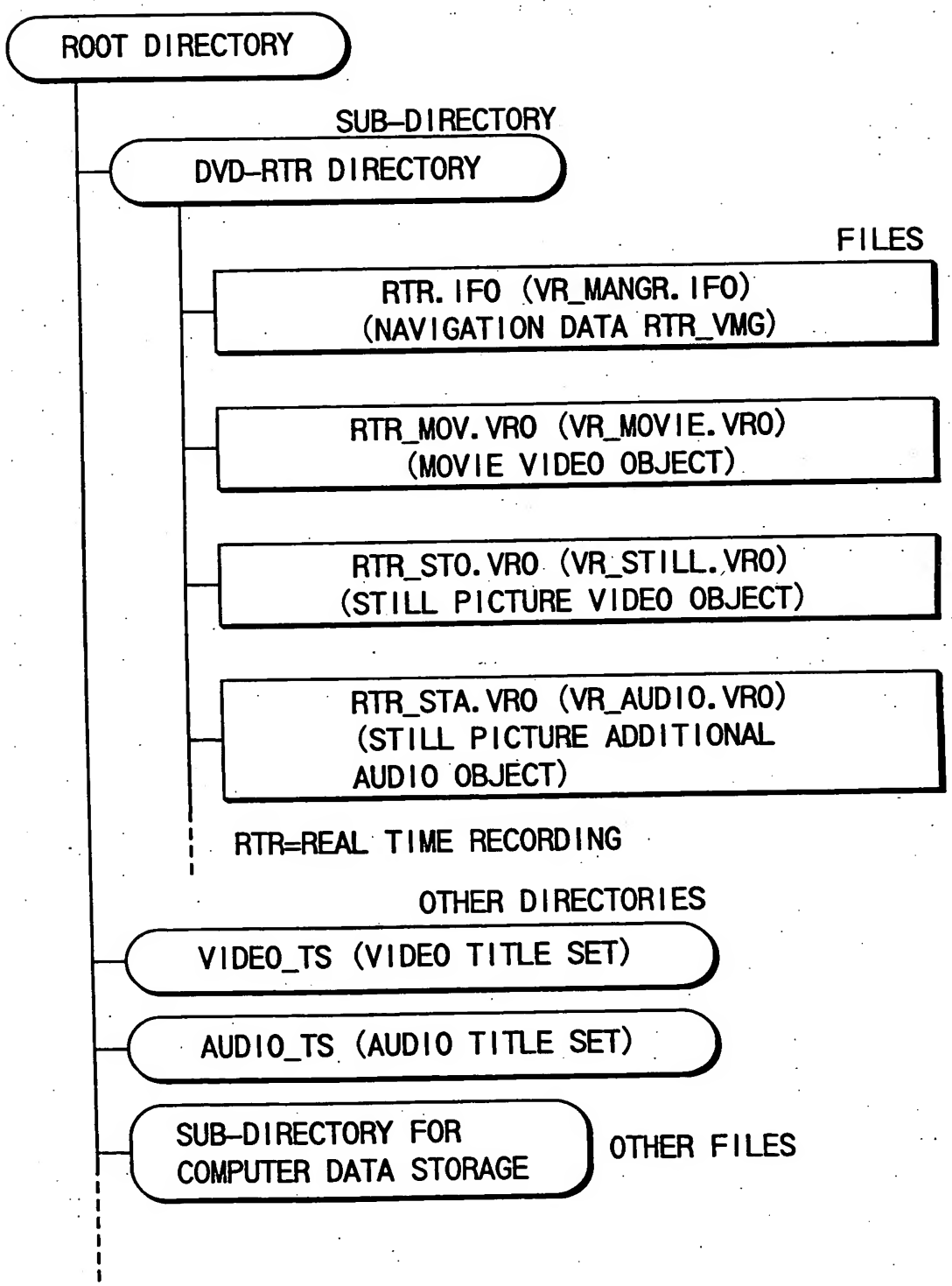

ROOT DIRECTORY
SUB-DIRECTORY
DVD-RTR DIRECTORY
FILES
RTR.IFO (VR_MANGR.IFO)
(NAVIGATION DATA RTR_VMG)
RTR_MOV.VRO (VR_MOVIE.VRO)
(MOVIE VIDEO OBJECT)
RTR_STO.VRO (VR_STILL.VRO)
(STILL PICTURE VIDEO OBJECT)
RTR_STA.VRO (VR_AUDIO.VRO)
(STILL PICTURE ADDITIONAL
AUDIO OBJECT)
RTR=REAL TIME RECORDING
OTHER DIRECTORIES
VIDEO_TS (VIDEO TITLE SET)
AUDIO_TS (AUDIO TITLE SET)
SUB-DIRECTORY FOR
COMPUTER DATA STORAGE
OTHER FILES

FIG. 5

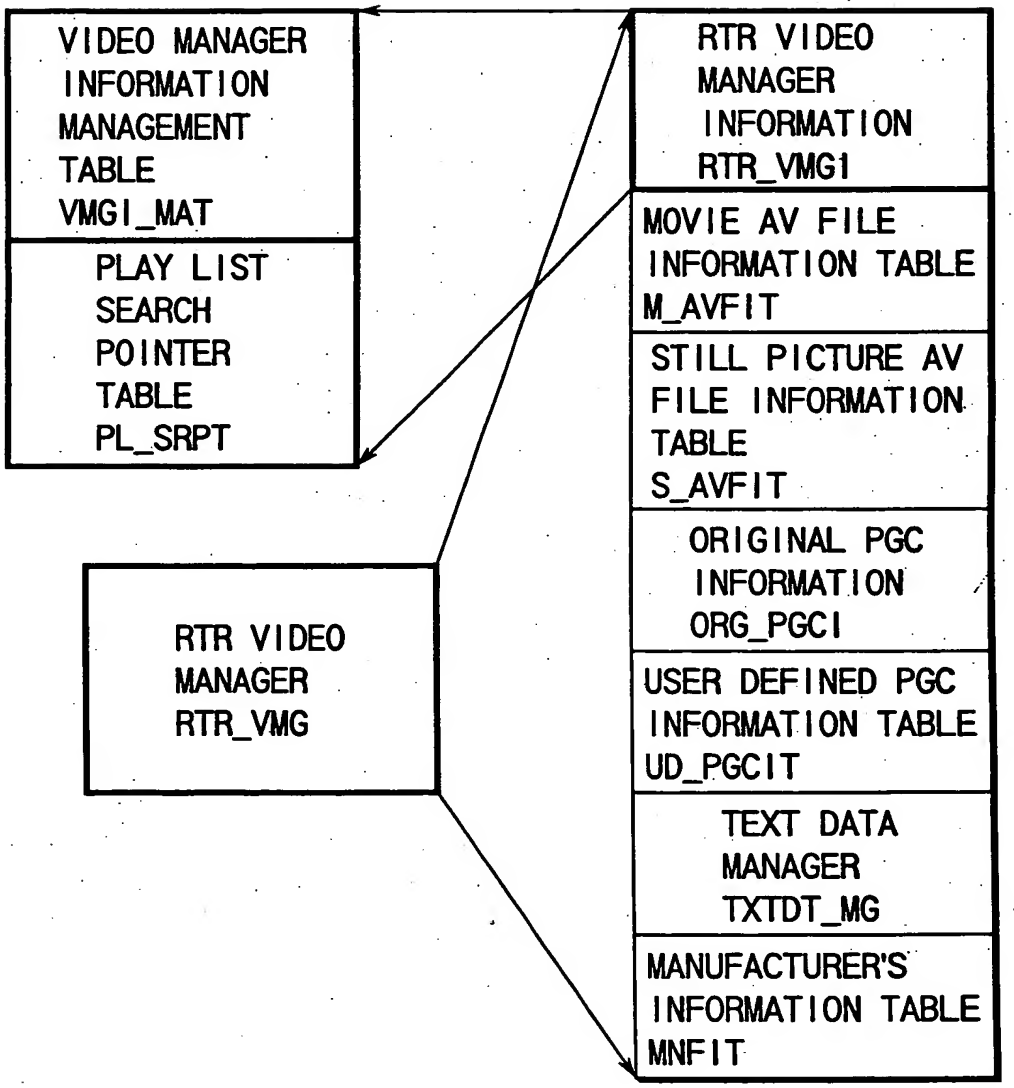

VIDEO MANAGER INFORMATION MANAGEMENT TABLE VMGI_MAT
PLAY LIST SEARCH POINTER TABLE PL_SRPT
RTR VIDEO MANAGER INFORMATION RTR_VMGI
MOVIE AV FILE INFORMATION TABLE M_AVFIT
STILL PICTURE AV FILE INFORMATION TABLE S_AVFIT
ORIGINAL PGC INFORMATION ORG_PGCI
USER DEFINED PGC INFORMATION TABLE UD_PGCIT
TEXT DATA MANAGER TXTDT_MG
MANUFACTURER'S INFORMATION TABLE MNFIT
RTR VIDEO MANAGER RTR_VMG

FIG. 6

CONTENTS OF VIDEO MANAGER INFORMATION MANAGEMENT TABLE (VMGI_MAT)

RBP	FILE NAME	CONTENTS
0-11	VMG_ID	VMG IDENTIFIER
12-15	RTR_VMG_EA	END ADDRESS OF RTR_VMG
16-27	RESERVED	RESERVED
28-31	VMGI_EA	END ADDRESS OF VMGI
32-33	VERN	VERSION NUMBER OF DVD SPECIFICATION FOR VIDEO RECORDING
32-127	RESERVED	RESERVED
128-129	TM_ZONE	TIME ZONE
130-131	STILL_TM	STILL TIME FOR STILL PICTURES
132-133	CHRS	CHARACTER SET CODE FOR PRIMARY TEXT
134-148	RSM_MRKI	RESUME MAKER INFORMATION
149-163	REP_PICTI	DISC REPRESENTATIVE PICTURE INFORMATION
164-191	RESERVED	RESERVED
192-195	M_AVFIT_SA	START ADDRESS OF M_AVFIT
196-199	S_AVFIT_SA	START ADDRESS OF S_AVFIT
200-207	RESERVED	RESERVED
208-211	ORG_PGCI_SA	START ADDRESS OF ORG_PGCI
212-215	UD_PGCIT_SA	START ADDRESS OF UD_PGCIT
216-219	TXTDT_MG_SA	START ADDRESS OF TXTDT_MG
220-223	MNFIT_SA	START ADDRESS OF MNFIT
224-511	RESERVED	RESERVED FOR FUTURE USE

RBP=RELATIVE BYTE POSITION

FIG. 7

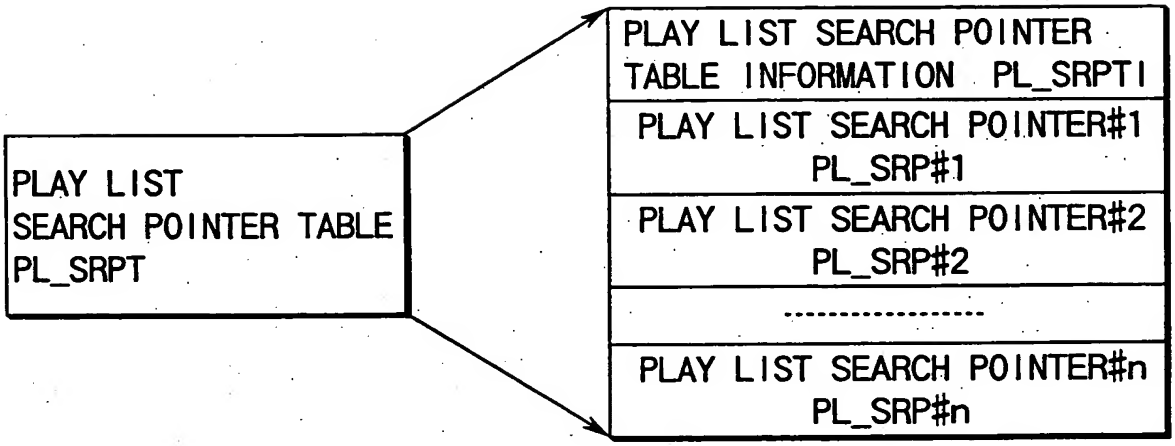


FIG. 8

CONTENTS OF PLAY LIST SEARCH POINTER TABLE INFORMATION (PL_SRPTI)

RBP	FILE NAME	CONTENTS
0-2	RESERVED	RESERVED
3	PL_SRP_Ns	NUMBER OF PLAY LIST SEARCH POINTERS
4-7	PL_SRPT_EA	END ADDRESS OF PL_SRPT

RBP=RELATIVE BYTE POSITION

FIG. 9

CONTENTS OF PLAY LIST SEARCH POINTER (PL_SRP)

RBP	FILE NAME	CONTENTS
0	RESERVED	RESERVED
1	PL_TY	PLAY LIST TYPE
2	PGCN	PGC NUMBER
3–7	PL_CREATE_TM	TIME WHEN PLAY LIST WAS CREATED
8–135	PRM_TXTI	PRIMARY TEXT INFORMATION
136–137	IT_TXT_SRPN	ITEM TEXT SEARCH POINTER NUMBER FOR THIS PLAY LIST IT_TXT_SRPN
138–145	THM_PTRI	THUMBNAIL POINTER INFORMATION

RBP=RELATIVE BYTE POSITION

FIG. 10

CONTENTS OF THUMBNAIL POINTER INFORMATION (THM_PTRI)

RBP	FILE NAME	CONTENTS
138–139	CN	CELL NUMBER
140–145	THM_PT	THUMBNAIL POINT

RBP=RELATIVE BYTE POSITION

FIG. 11

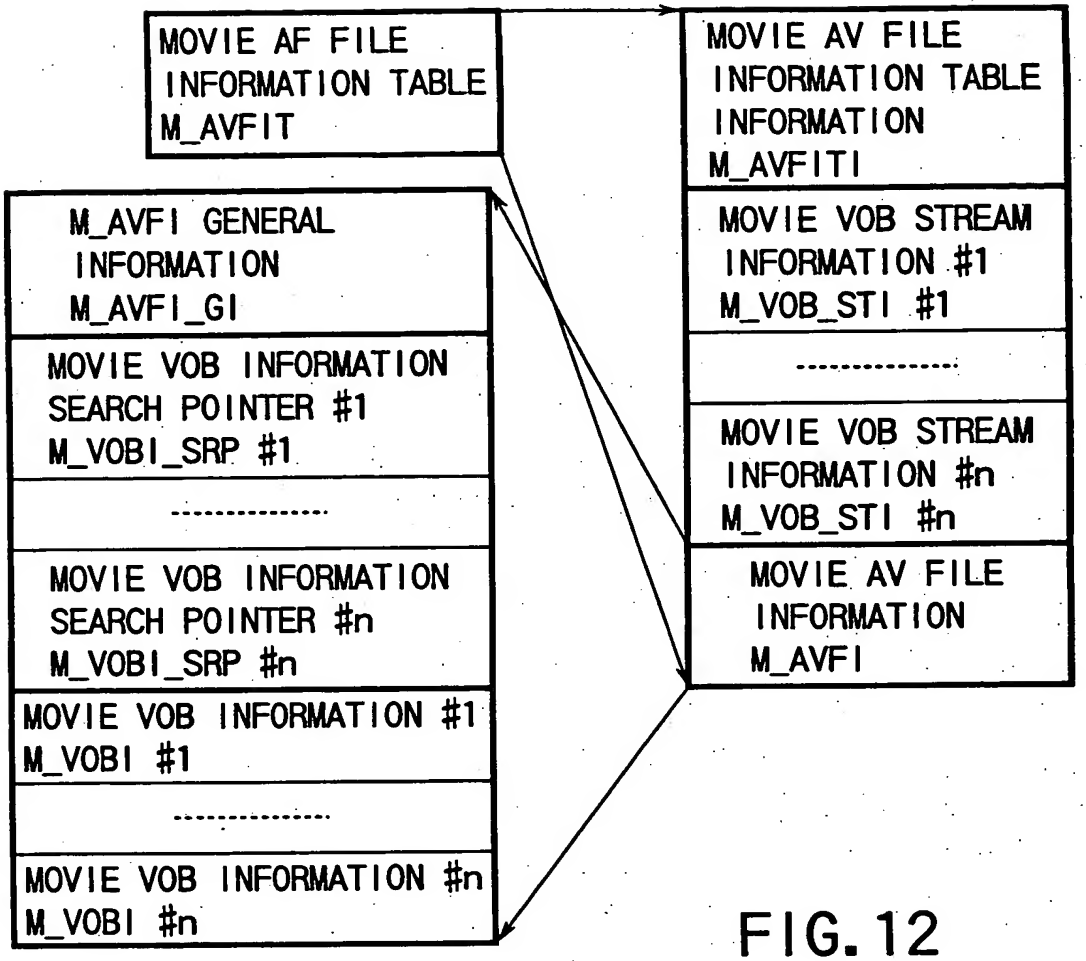

MOVIE AF FILE INFORMATION TABLE M_AVFIT
M_AVFI GENERAL INFORMATION M_AVFI_GI
MOVIE VOB INFORMATION SEARCH POINTER #1 M_VOBI_SRP #1
MOVIE VOB INFORMATION SEARCH POINTER #n M_VOBI_SRP #n
MOVIE VOB INFORMATION #1 M_VOBI #1
MOVIE VOB INFORMATION #n M_VOBI #n
MOVIE AV FILE INFORMATION TABLE INFORMATION M_AVFITI
MOVIE VOB STREAM INFORMATION #1 M_VOB_STI #1
MOVIE VOB STREAM INFORMATION #n M_VOB_STI #n
MOVIE AV FILE INFORMATION M_AVFI

FIG. 12

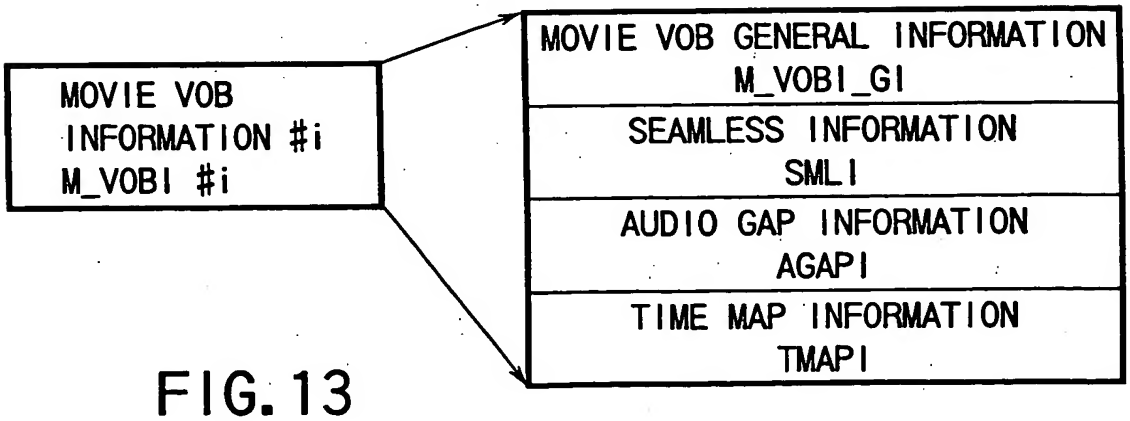

MOVIE VOB INFORMATION #i M_VOBI #i
MOVIE VOB GENERAL INFORMATION M_VOBI_GI
SEAMLESS INFORMATION SMLI
AUDIO GAP INFORMATION AGAPI
TIME MAP INFORMATION TMAPI

FIG. 13

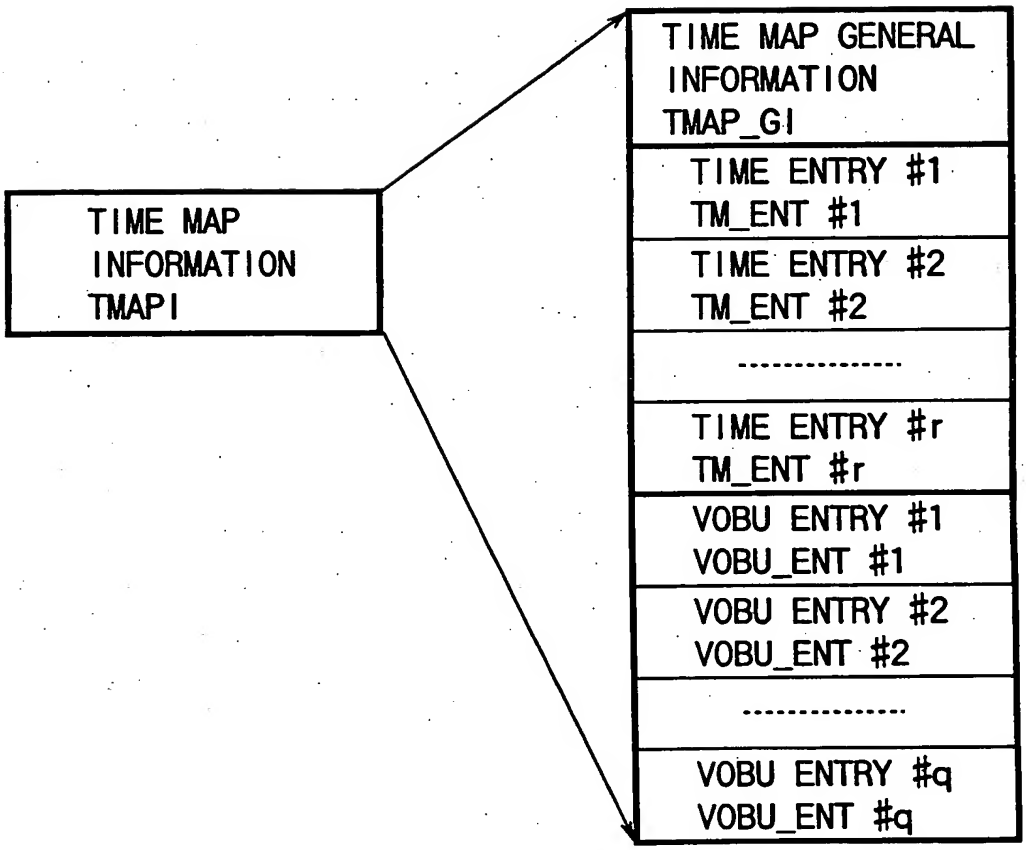

TIME MAP INFORMATION TMAPI
TIME MAP GENERAL INFORMATION TMAP_GI
TIME ENTRY #1 TM_ENT #1
TIME ENTRY #2 TM_ENT #2
TIME ENTRY #r TM_ENT #r
VOBU ENTRY #1 VOBU_ENT #1
VOBU ENTRY #2 VOBU_ENT #2
VOBU ENTRY #q VOBU_ENT #q

FIG. 14

CONTENTS OF TIME MAP GENERAL INFORMATION (TMAP_GI)

RBP	FILE NAME	CONTENTS
0–1	TM_ENT_Ns	NUMBER OF TIME ENTRIES
2–3	VOBU_ENT_Ns	NUMBER OF VOBU ENTRIES
4–5	TM_OFS	TIME OFFSET
6–9	ADR_OFS	ADDRESS OFFSET

RBP=RELATIVE BYTE POSITION

FIG. 15

CONTENTS OF TIME ENTRY (TM_ENT)

RBP	FILE NAME	CONTENTS
0–1	VOBU_ENTN	VOBU ENTRY NUMBER
2	TM_DIFF	TIME DIFFERENCE
3–6	VOBU_ADR	TARGET VOBU ADDRESS

RBP=RELATIVE BYTE POSITION

FIG. 16

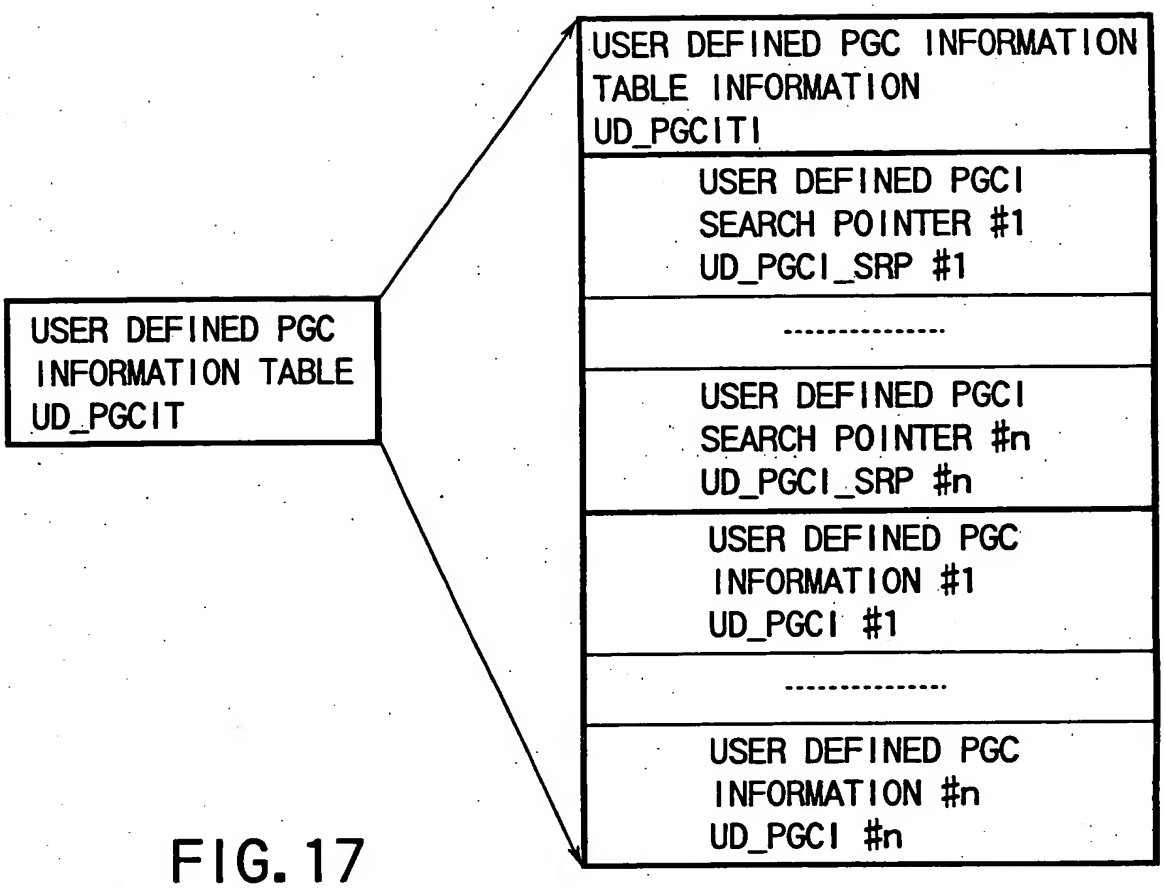

USER DEFINED PGC INFORMATION TABLE UD_PGCIT
USER DEFINED PGC INFORMATION TABLE INFORMATION UD_PGCITI
USER DEFINED PGCI SEARCH POINTER #1 UD_PGCI_SRP #1
USER DEFINED PGCI SEARCH POINTER #n UD_PGCI_SRP #n
USER DEFINED PGC INFORMATION #1 UD_PGCI #1
USER DEFINED PGC INFORMATION #n UD_PGCI #n

FIG. 17

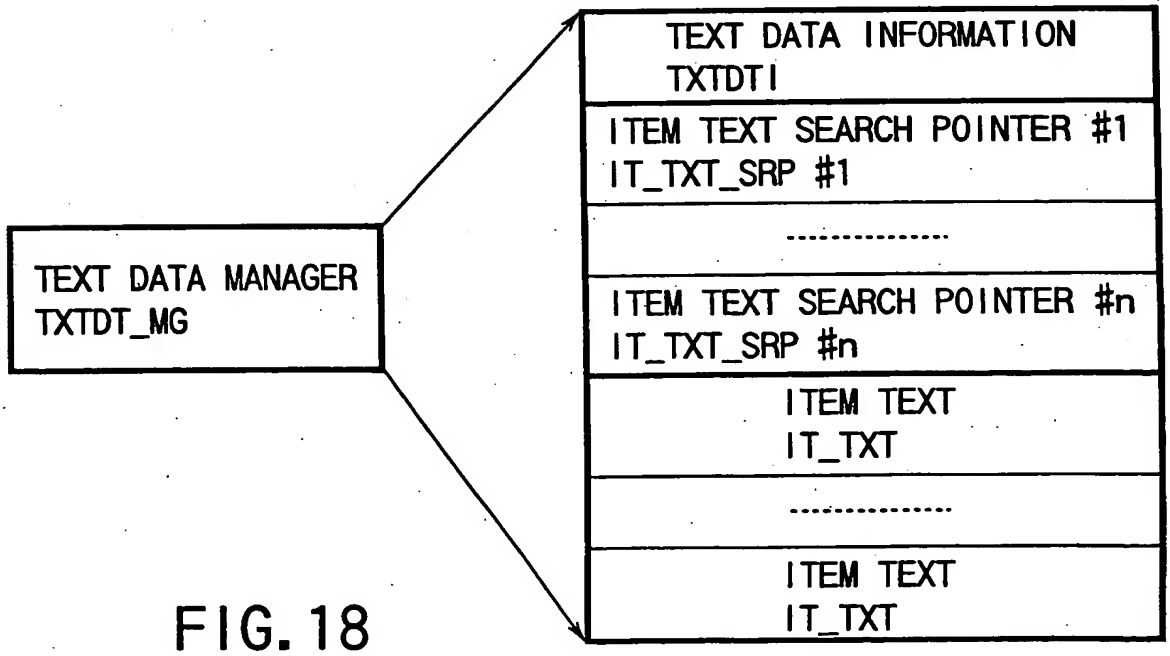

TEXT DATA MANAGER TXTDT_MG
TEXT DATA INFORMATION TXTDTI
ITEM TEXT SEARCH POINTER #1 IT_TXT_SRP #1
ITEM TEXT SEARCH POINTER #n IT_TXT_SRP #n
ITEM TEXT IT_TXT
ITEM TEXT IT_TXT

FIG. 18

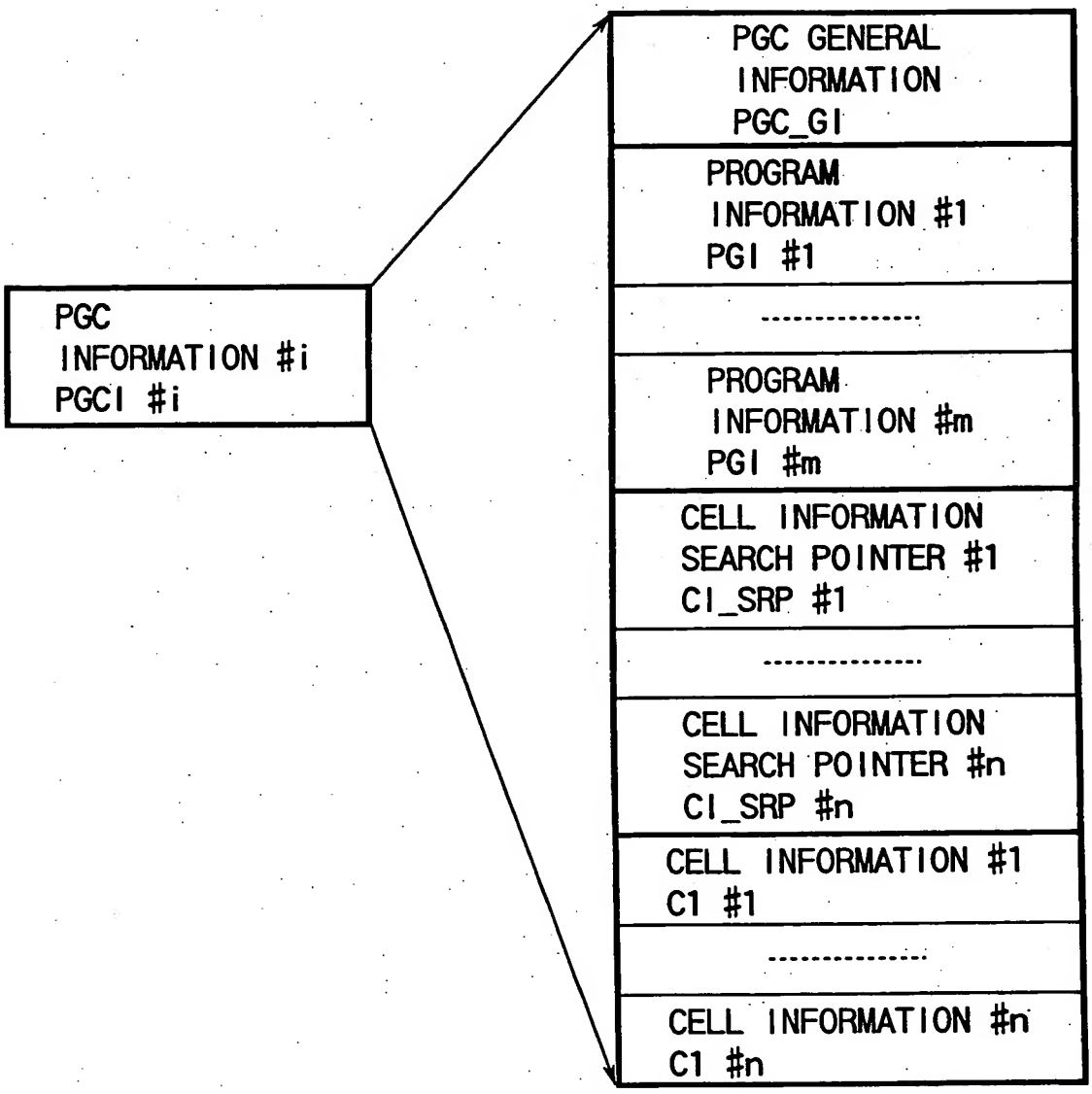

PGC
INFORMATION #i
PGCI #i
PGC GENERAL
INFORMATION
PGC_GI
PROGRAM
INFORMATION #1
PGI #1
PROGRAM
INFORMATION #m
PGI #m
CELL INFORMATION
SEARCH POINTER #1
CI_SRP #1
CELL INFORMATION
SEARCH POINTER #n
CI_SRP #n
CELL INFORMATION #1
C1 #1
CELL INFORMATION #n
C1 #n

FIG. 19

CONTENTS OF PGC GENERAL INFORMATION (PGC_GI)

RBP	FILE NAME	CONTENTS
0	RESERVED	RESERVED
1	PG_Ns	NUMBER OF PROGRAMS
2-3	CI_SRP_Ns	NUMBER OF CI_SRPs

RBP=RELATIVE BYTE POSITION

FIG. 20

CONTENTS OF PROGRAM INFORMATION (PGI)

RBP	FILE NAME	CONTENTS
0	RESERVED	RESERVED
1	PG_TY	PROGRAM TYPE
2-3	C_Ns	NUMBER OF CELLS IN THIS PROGRAM
4-131	PRM_TXTI	PRIMARY TEXT INFORMATION
132-133	IT_TXT_SRPN	IT_TXT_SRP NUMBER
134-141	THM_PTRI	THUMBNAIL POINTER INFORMATION

RBP=RELATIVE BYTE POSITION

FIG. 21

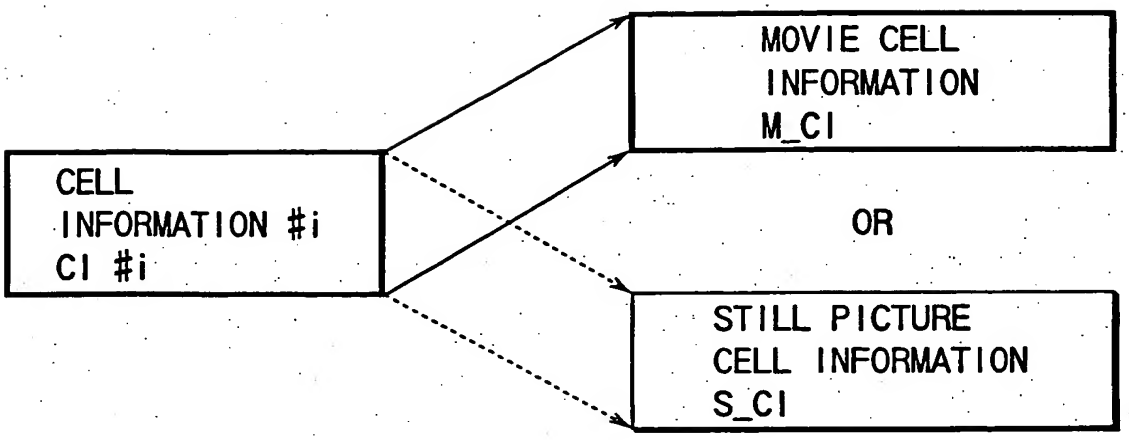

CELL
INFORMATION #i
CI #i
MOVIE CELL
INFORMATION
M_CI
OR
STILL PICTURE
CELL INFORMATION
S_CI

FIG. 22

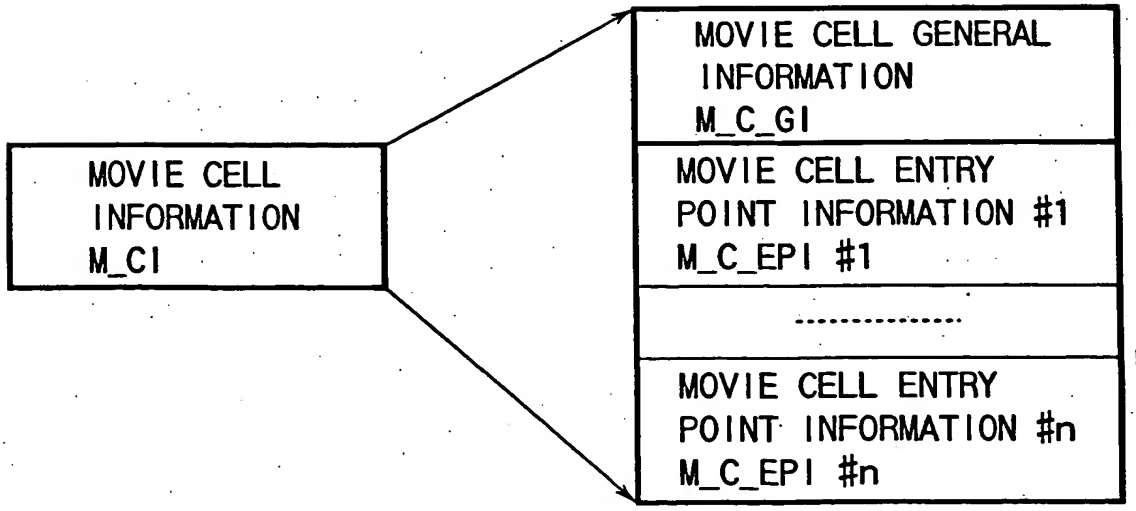

MOVIE CELL
INFORMATION
M_CI
MOVIE CELL GENERAL
INFORMATION
M_C_GI
MOVIE CELL ENTRY
POINT INFORMATION #1
M_C_EPI #1
.....
MOVIE CELL ENTRY
POINT INFORMATION #n
M_C_EPI #n

FIG. 23

CONTENTS OF MOVIE CELL GENERAL INFORMATION (M_C_GI)

RBP	FILE NAME	CONTENTS
0	RESERVED	RESERVED
1	C_TY	CELL TYPE
2-3	M_VOBI_SRPN	MOVIE VOBI SEARCH POINTER NUMBER
4-5	C_EPI_Ns	NUMBER OF CELL ENTRY POINT INFORMATION
6-11	C_V_S_PTM	PRESENTATION START TIME OF THIS CELL
12-17	C_V_E_PTM	PRESENTATION END TIME OF THIS CELL

RBP=RELATIVE BYTE POSITION

FIG. 24

CONTENTS OF MOVIE CELL ENTRY POINT INFORMATION (M_C_EPI)

RBP	FILE NAME	CONTENTS
0	EP_TY	ENTRY POINT TYPE
1-6	EP_PTM	PRESENTATION TIME OF ENTRY POINT
7-134	PRM_TXTI	PRIMARY TEXT INFORMATION

RBP=RELATIVE BYTE POSITION

INFORMATION TYPE
DATE INFORMATION
TEXT INFORMATION

FIG. 25

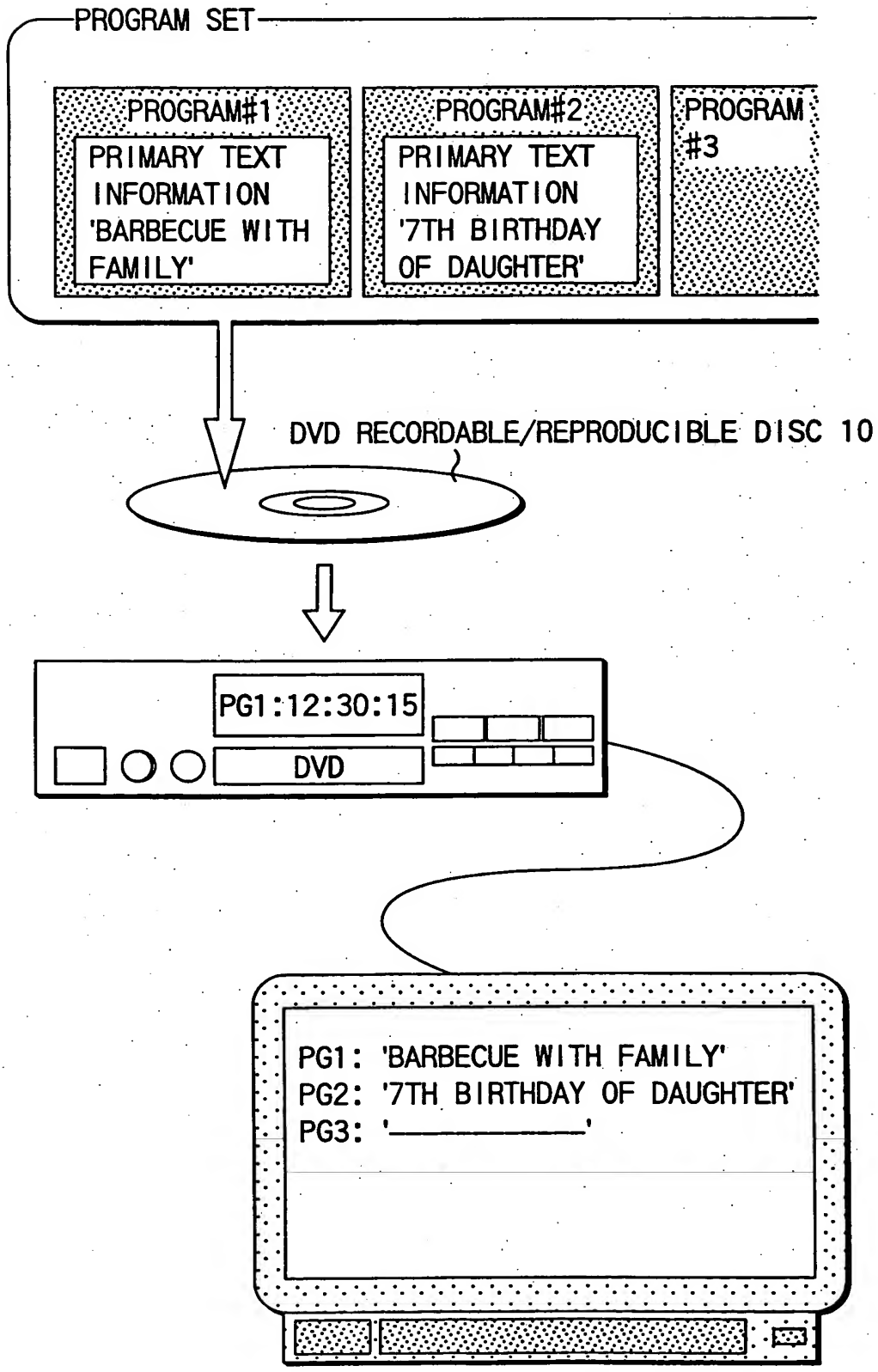

PROGRAM SET
PROGRAM#1
PRIMARY TEXT INFORMATION 'BARBECUE WITH FAMILY'
PROGRAM#2
PRIMARY TEXT INFORMATION '7TH BIRTHDAY OF DAUGHTER'
PROGRAM #3
DVD RECORDABLE/REPRODUCIBLE DISC 10
PG1:12:30:15
DVD
PG1: 'BARBECUE WITH FAMILY'
PG2: '7TH BIRTHDAY OF DAUGHTER'
PG3: '_____'

FIG. 26

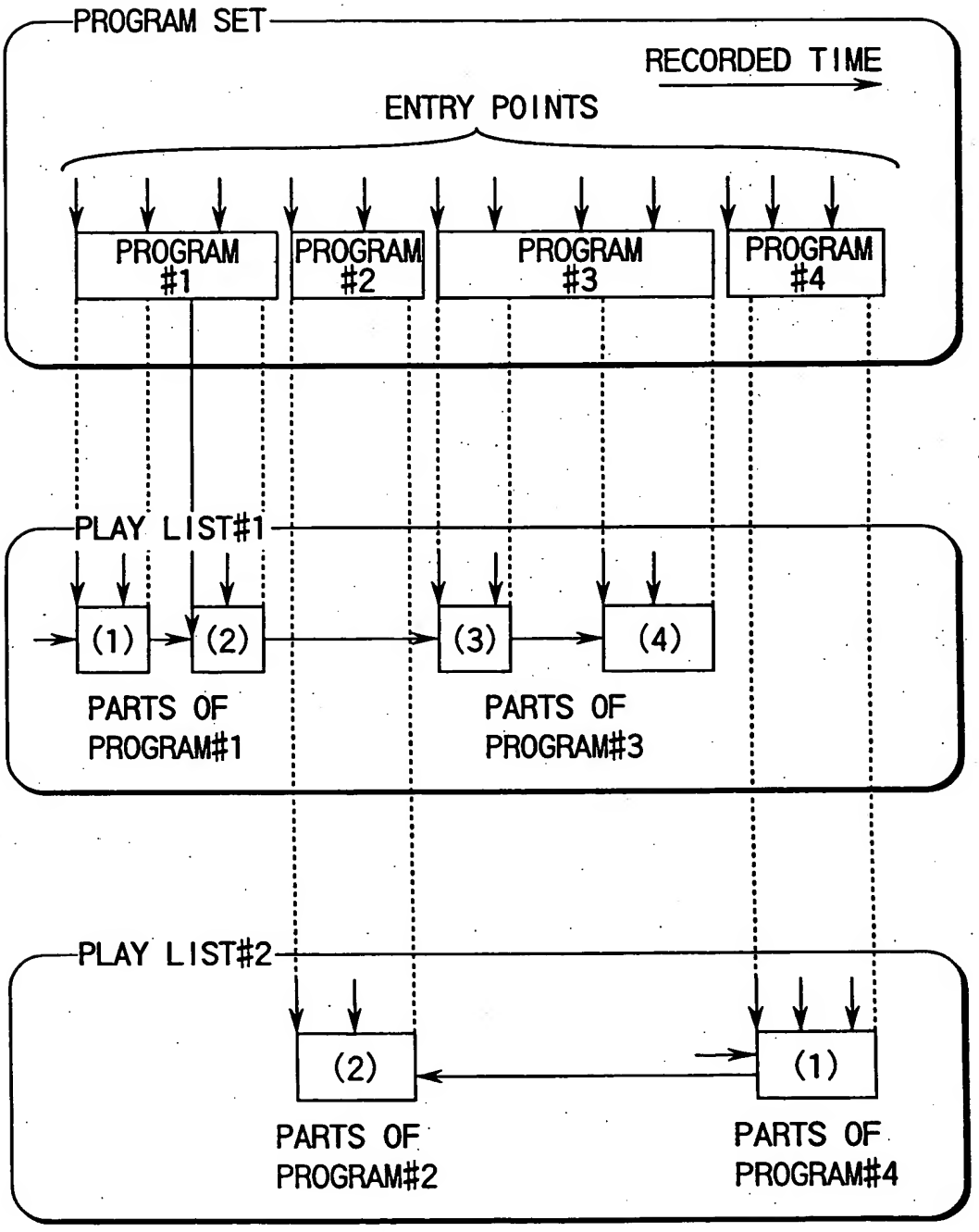

PROGRAM SET
RECORDED TIME
ENTRY POINTS
PROGRAM #1
PROGRAM #2
PROGRAM #3
PROGRAM #4
PLAY LIST#1
(1)
(2)
(3)
(4)
PARTS OF PROGRAM#1
PARTS OF PROGRAM#3
PLAY LIST#2
(2)
(1)
PARTS OF PROGRAM#2
PARTS OF PROGRAM#4

FIG. 27

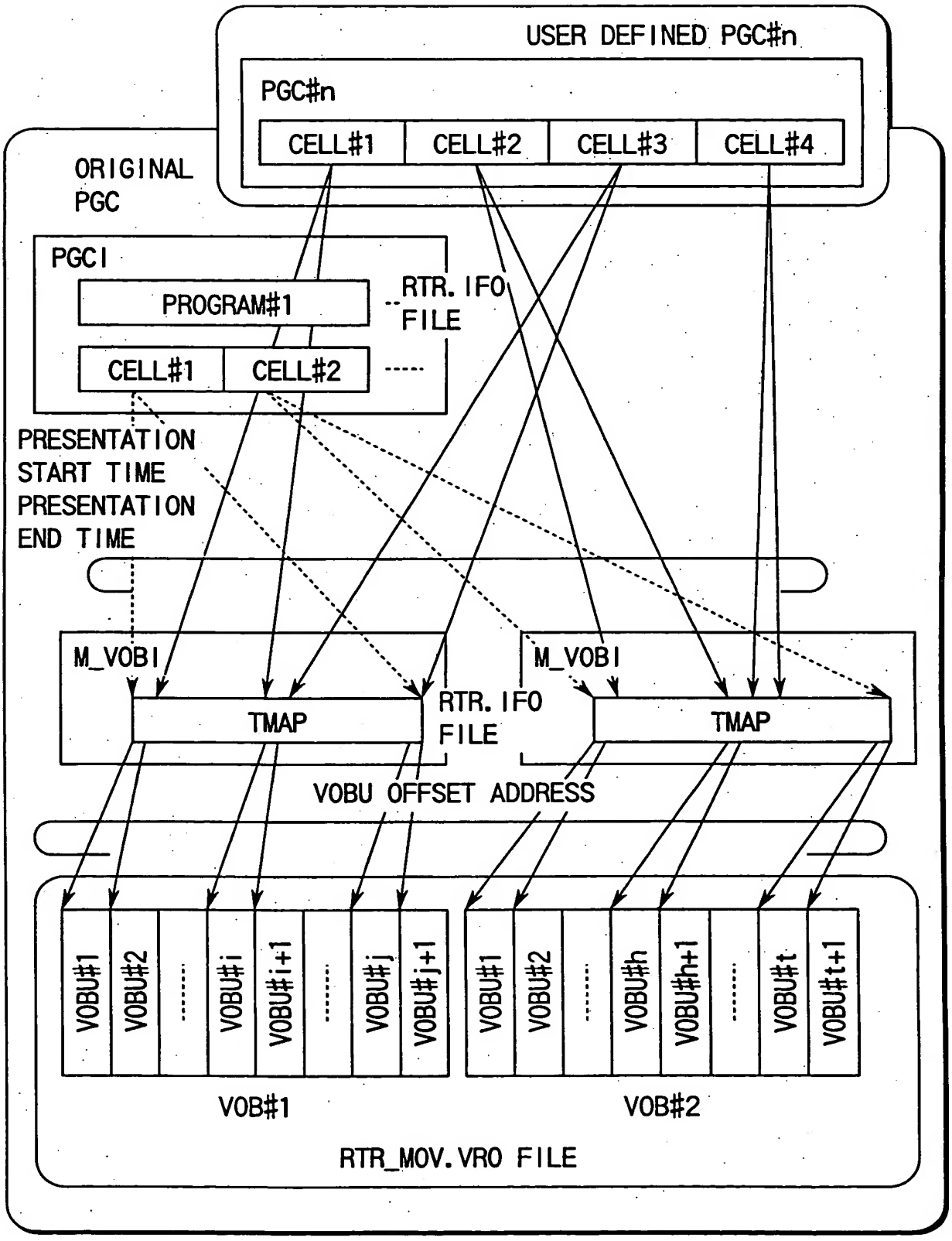

USER DEFINED PGC#n
PGC#n
CELL#1
CELL#2
CELL#3
CELL#4
ORIGINAL PGC
PGCI
PROGRAM#1
RTR. IFO FILE
CELL#1
CELL#2
PRESENTATION START TIME
PRESENTATION END TIME
M_VOBI
M_VOBI
TMAP
RTR. IFO FILE
TMAP
VOBU OFFSET ADDRESS
VOBU#1
VOBU#2
VOBU#i
VOBU#i+1
VOBU#j
VOBU#j+1
VOBU#1
VOBU#2
VOBU#h
VOBU#h+1
VOBU#t
VOBU#t+1
VOB#1
VOB#2
RTR_MOV.VRO FILE

FIG. 28

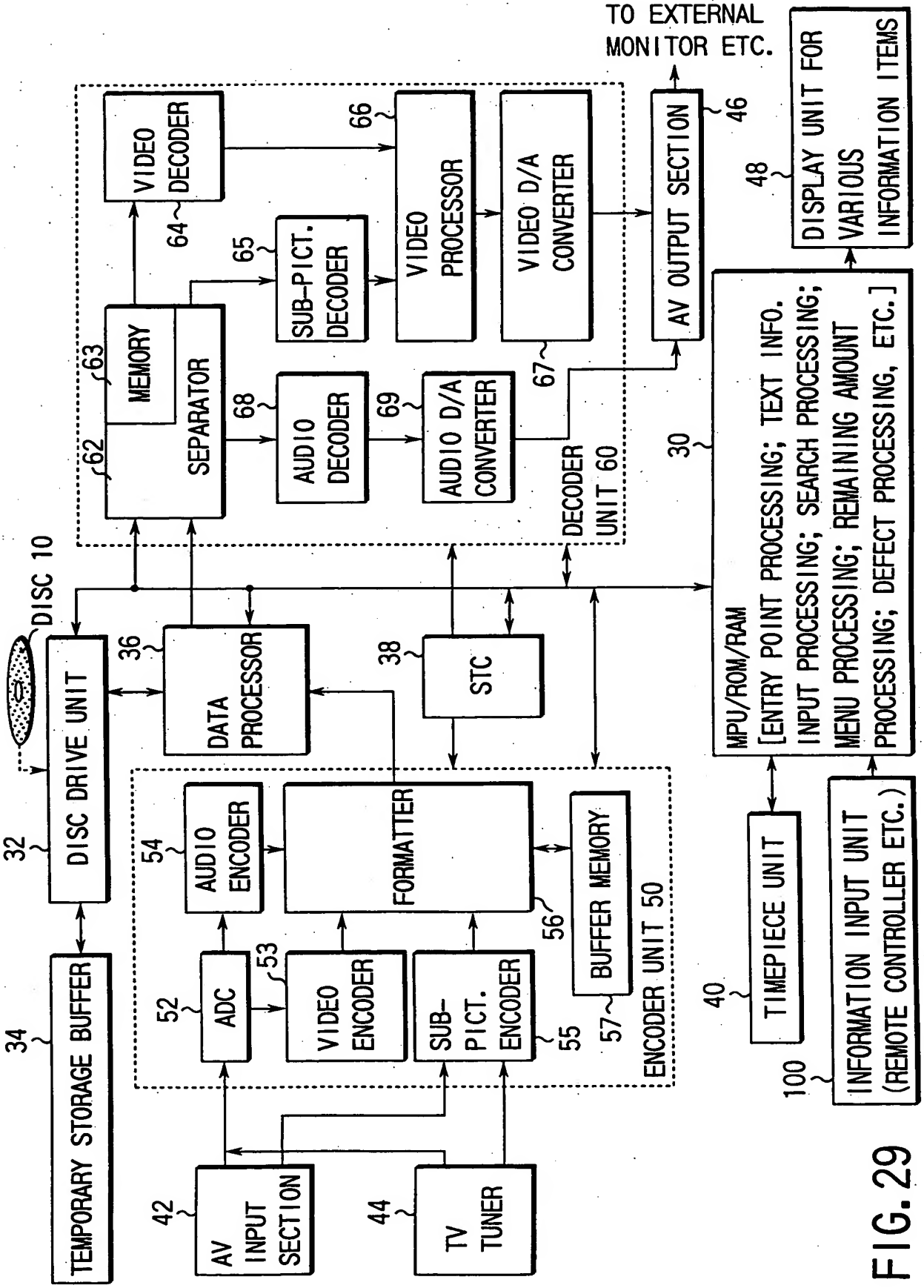

TO EXTERNAL MONITOR ETC.
DISC 10
TEMPORARY STORAGE BUFFER
34
DISC DRIVE UNIT
32
DATA PROCESSOR
36
STC
38
MPU/ROM/RAM
[ENTRY POINT PROCESSING; TEXT INFO. INPUT PROCESSING; SEARCH PROCESSING; MENU PROCESSING; REMAINING AMOUNT PROCESSING; DEFECT PROCESSING, ETC.]
30
DECODER UNIT 60
VIDEO DECODER
64
SUB-PICT. DECODER
65
VIDEO PROCESSOR
66
VIDEO D/A CONVERTER
67
AV OUTPUT SECTION
46
DISPLAY UNIT FOR VARIOUS INFORMATION ITEMS
48
MEMORY
63
SEPARATOR
62
AUDIO DECODER
68
AUDIO D/A CONVERTER
69
ENCODER UNIT 50
AUDIO ENCODER
54
FORMATTER
BUFFER MEMORY
56
ADC
52
VIDEO ENCODER
53
SUB-PICT. ENCODER
55
57
AV INPUT SECTION
42
TV TUNER
44
TIMEPIECE UNIT
40
INFORMATION INPUT UNIT (REMOTE CONTROLLER ETC.)
100

FIG. 29

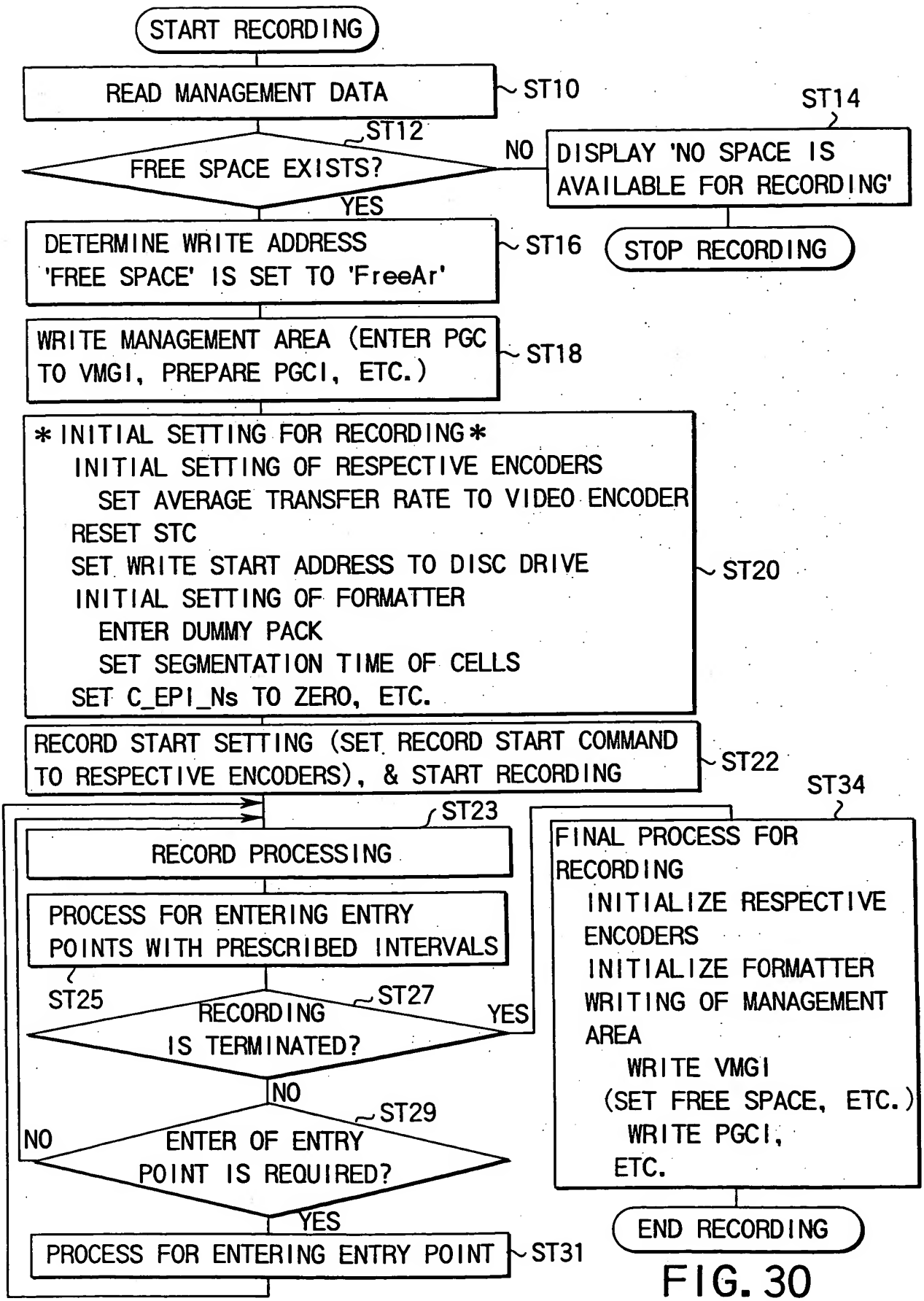

START RECORDING
READ MANAGEMENT DATA
ST10
ST12
FREE SPACE EXISTS?
NO
ST14
DISPLAY 'NO SPACE IS AVAILABLE FOR RECORDING'
STOP RECORDING
YES
DETERMINE WRITE ADDRESS 'FREE SPACE' IS SET TO 'FreeAr'
ST16
WRITE MANAGEMENT AREA (ENTER PGC TO VMGI, PREPARE PGCI, ETC.)
ST18
INITIAL SETTING FOR RECORDING
INITIAL SETTING OF RESPECTIVE ENCODERS
SET AVERAGE TRANSFER RATE TO VIDEO ENCODER
RESET STC
SET WRITE START ADDRESS TO DISC DRIVE
INITIAL SETTING OF FORMATTER
ENTER DUMMY PACK
SET SEGMENTATION TIME OF CELLS
SET C_EPI_Ns TO ZERO, ETC.
ST20
RECORD START SETTING (SET RECORD START COMMAND TO RESPECTIVE ENCODERS), & START RECORDING
ST22
ST23
RECORD PROCESSING
PROCESS FOR ENTERING ENTRY POINTS WITH PRESCRIBED INTERVALS
ST25
ST27
RECORDING IS TERMINATED?
YES
NO
ST29
NO
ENTER OF ENTRY POINT IS REQUIRED?
YES
PROCESS FOR ENTERING ENTRY POINT
ST31
ST34
FINAL PROCESS FOR RECORDING
INITIALIZE RESPECTIVE ENCODERS
INITIALIZE FORMATTER
WRITING OF MANAGEMENT AREA
WRITE VMGI (SET FREE SPACE, ETC.)
WRITE PGCI, ETC.
END RECORDING

FIG. 30

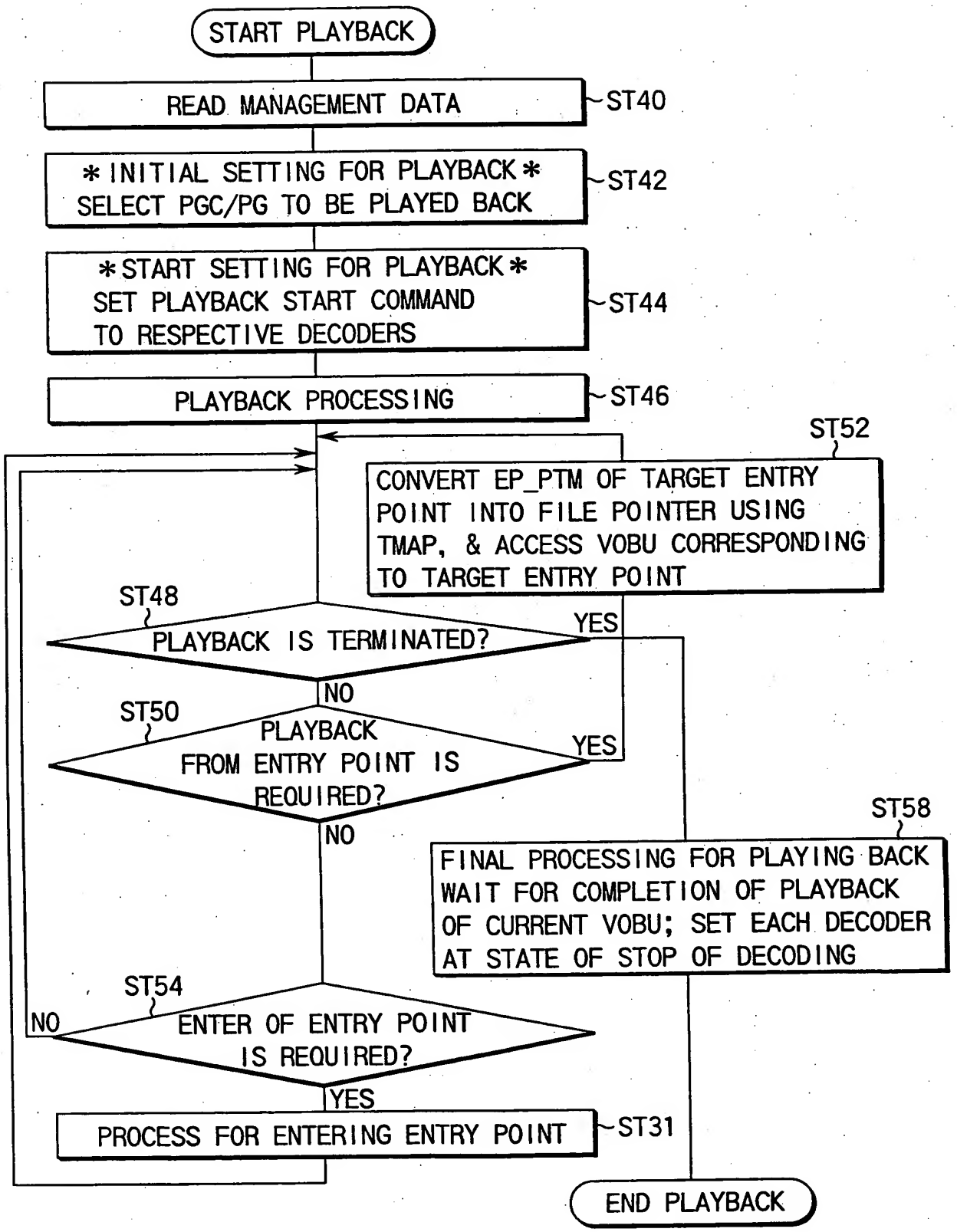

START PLAYBACK
READ MANAGEMENT DATA
ST40
INITIAL SETTING FOR PLAYBACK
SELECT PGC/PG TO BE PLAYED BACK
ST42
START SETTING FOR PLAYBACK
SET PLAYBACK START COMMAND
TO RESPECTIVE DECODERS
ST44
PLAYBACK PROCESSING
ST46
ST52
CONVERT EP_PTM OF TARGET ENTRY POINT INTO FILE POINTER USING TMAP, & ACCESS VOBU CORRESPONDING TO TARGET ENTRY POINT
ST48
PLAYBACK IS TERMINATED?
YES
NO
ST50
PLAYBACK FROM ENTRY POINT IS REQUIRED?
YES
NO
ST58
FINAL PROCESSING FOR PLAYING BACK
WAIT FOR COMPLETION OF PLAYBACK OF CURRENT VOBU; SET EACH DECODER AT STATE OF STOP OF DECODING
ST54
NO
ENTER OF ENTRY POINT IS REQUIRED?
YES
PROCESS FOR ENTERING ENTRY POINT
ST31
END PLAYBACK

FIG. 31

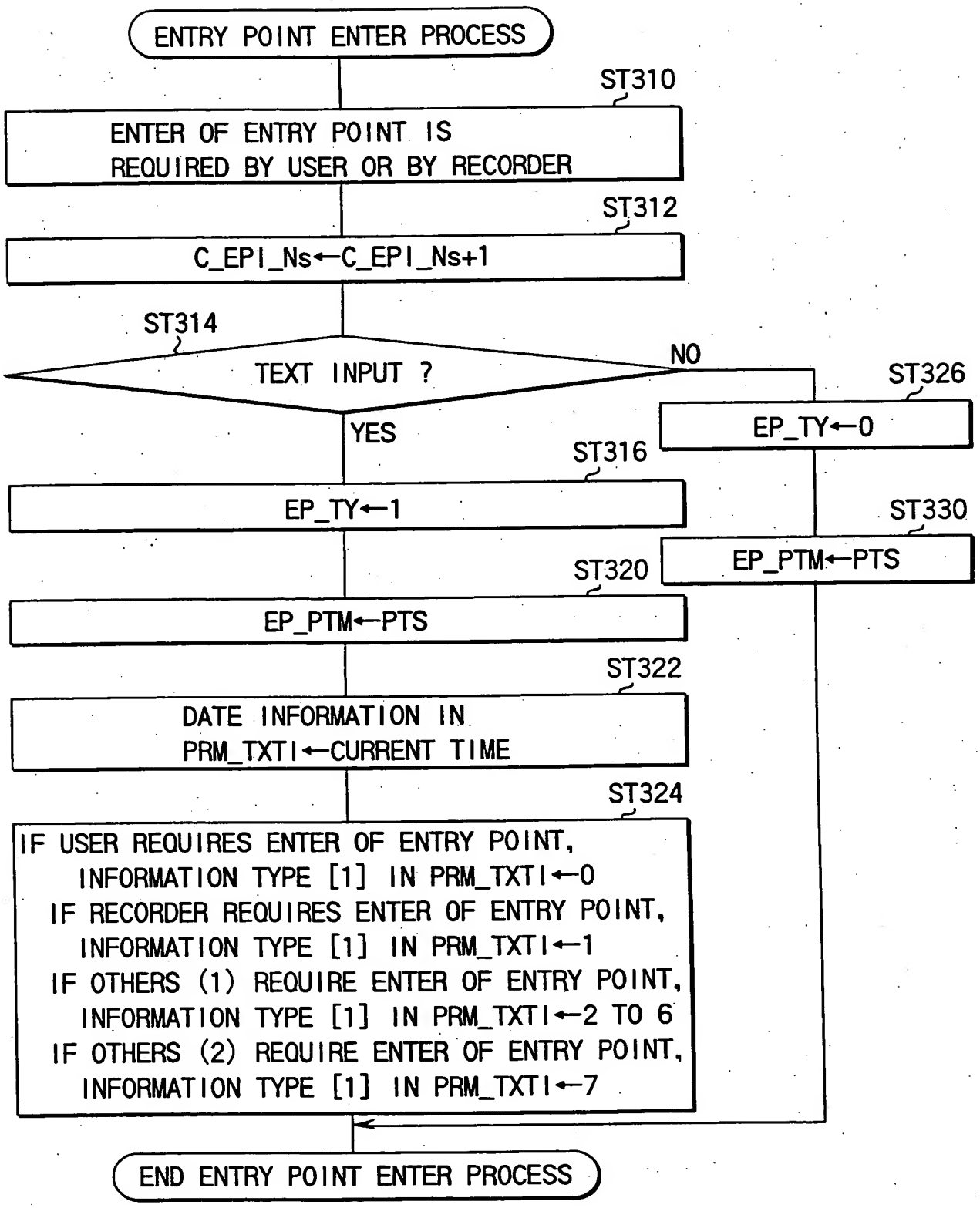

ENTRY POINT ENTER PROCESS
ST310
ENTER OF ENTRY POINT IS
REQUIRED BY USER OR BY RECORDER
ST312
C_EPI_Ns←C_EPI_Ns+1
ST314
TEXT INPUT ?
NO
ST326
EP_TY←0
YES
ST316
EP_TY←1
ST330
EP_PTM←PTS
ST320
EP_PTM←PTS
ST322
DATE INFORMATION IN
PRM_TXTI←CURRENT TIME
ST324
IF USER REQUIRES ENTER OF ENTRY POINT,
INFORMATION TYPE [1] IN PRM_TXTI←0
IF RECORDER REQUIRES ENTER OF ENTRY POINT,
INFORMATION TYPE [1] IN PRM_TXTI←1
IF OTHERS (1) REQUIRE ENTER OF ENTRY POINT,
INFORMATION TYPE [1] IN PRM_TXTI←2 TO 6
IF OTHERS (2) REQUIRE ENTER OF ENTRY POINT,
INFORMATION TYPE [1] IN PRM_TXTI←7
END ENTRY POINT ENTER PROCESS

FIG. 32

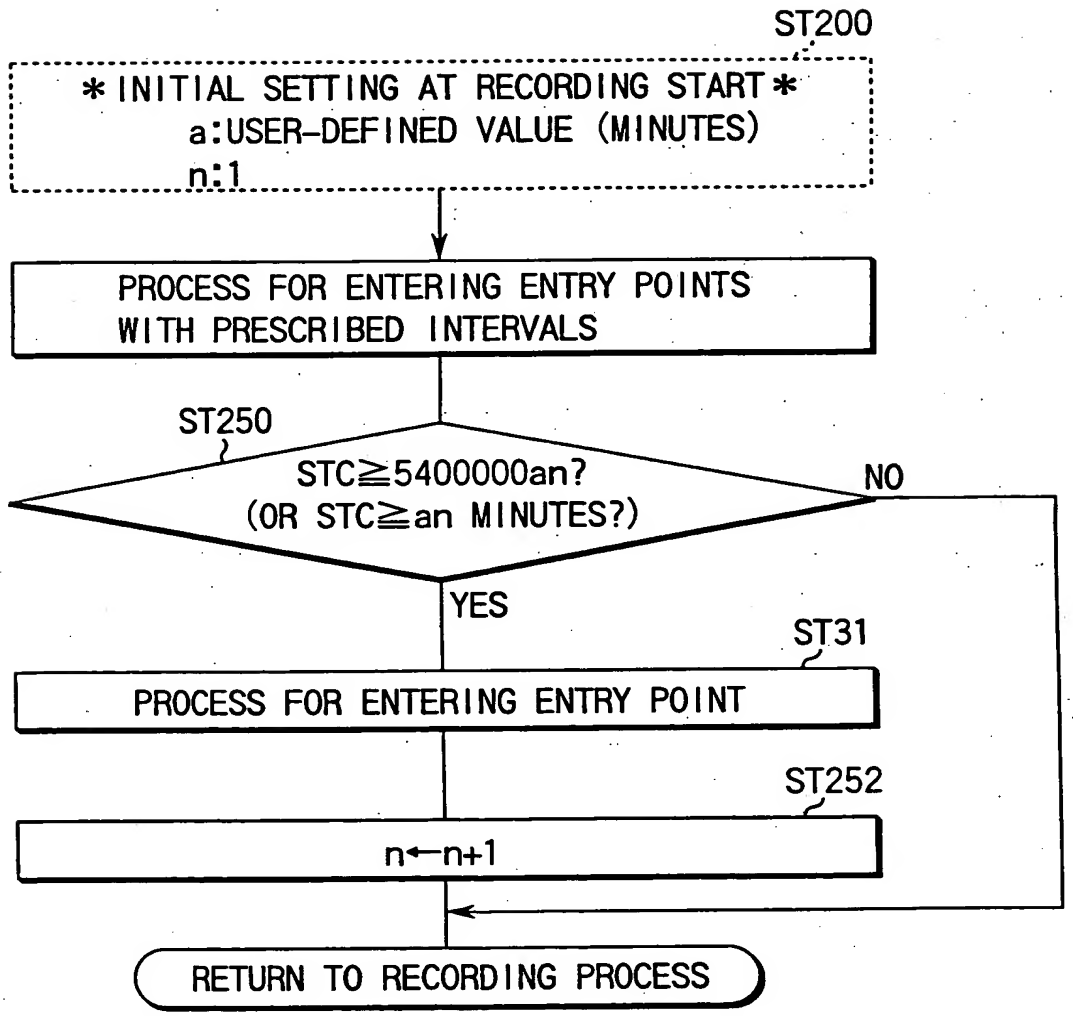

ST200
* INITIAL SETTING AT RECORDING START *
a:USER-DEFINED VALUE (MINUTES)
n:1
PROCESS FOR ENTERING ENTRY POINTS WITH PRESCRIBED INTERVALS
ST250
STC≧5400000an?
(OR STC≧an MINUTES?)
NO
YES
ST31
PROCESS FOR ENTERING ENTRY POINT
ST252
n←n+1
RETURN TO RECORDING PROCESS

FIG. 33

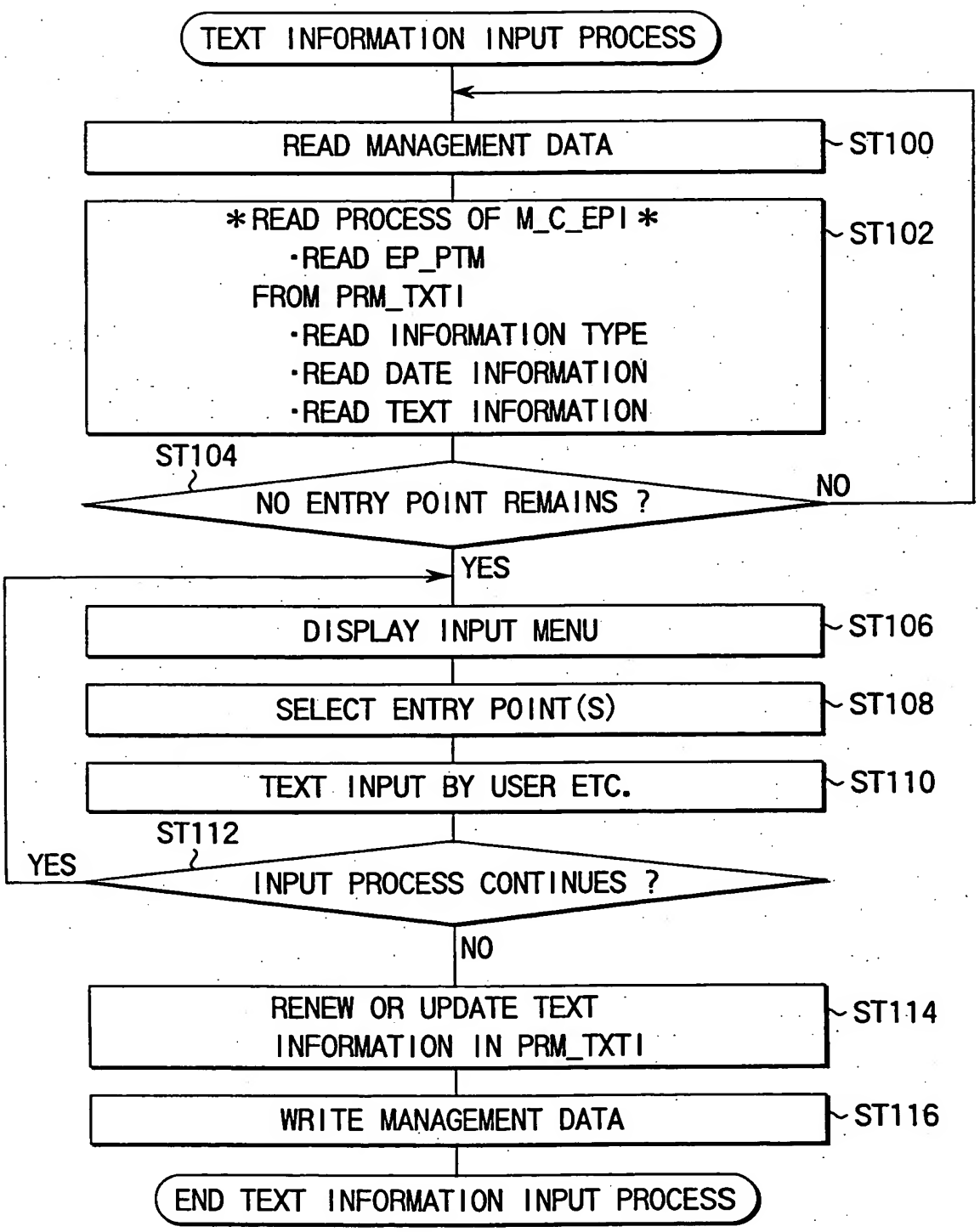

TEXT INFORMATION INPUT PROCESS
READ MANAGEMENT DATA
ST100
READ PROCESS OF M_C_EPI
·READ EP_PTM
FROM PRM_TXTI
·READ INFORMATION TYPE
·READ DATE INFORMATION
·READ TEXT INFORMATION
ST102
ST104
NO ENTRY POINT REMAINS ?
NO
YES
DISPLAY INPUT MENU
ST106
SELECT ENTRY POINT(S)
ST108
TEXT INPUT BY USER ETC.
ST110
ST112
YES
INPUT PROCESS CONTINUES ?
NO
RENEW OR UPDATE TEXT
INFORMATION IN PRM_TXTI
ST114
WRITE MANAGEMENT DATA
ST116
END TEXT INFORMATION INPUT PROCESS

FIG. 34

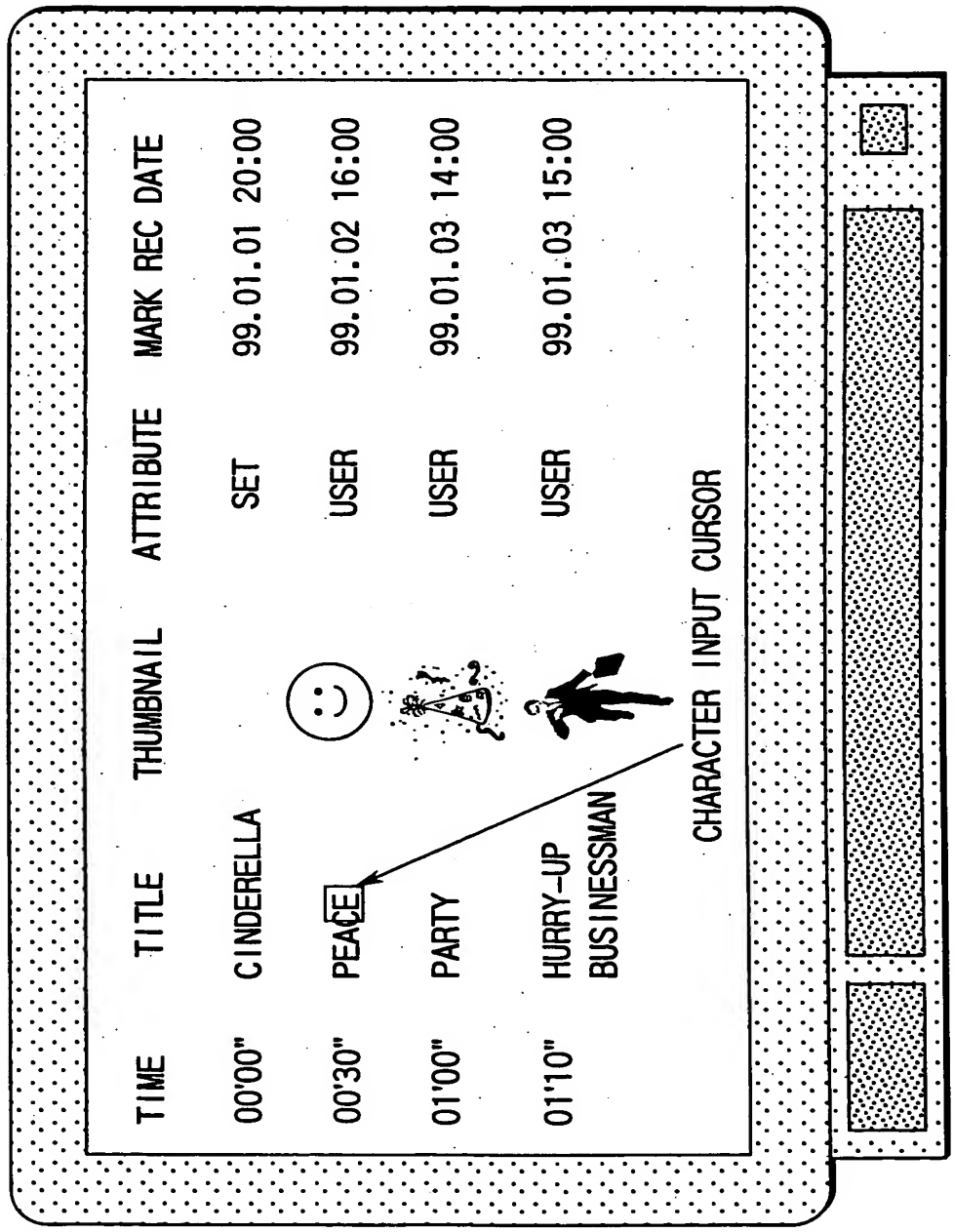

TIME
TITLE
THUMBNAIL
ATTRIBUTE
MARK REC DATE
00'00"
CINDERELLA
SET
99.01.01 20:00
00'30"
PEACE
USER
99.01.02 16:00
01'00"
PARTY
USER
99.01.03 14:00
01'10"
HURRY-UP BUSINESSMAN
USER
99.01.03 15:00
CHARACTER INPUT CURSOR

FIG. 35

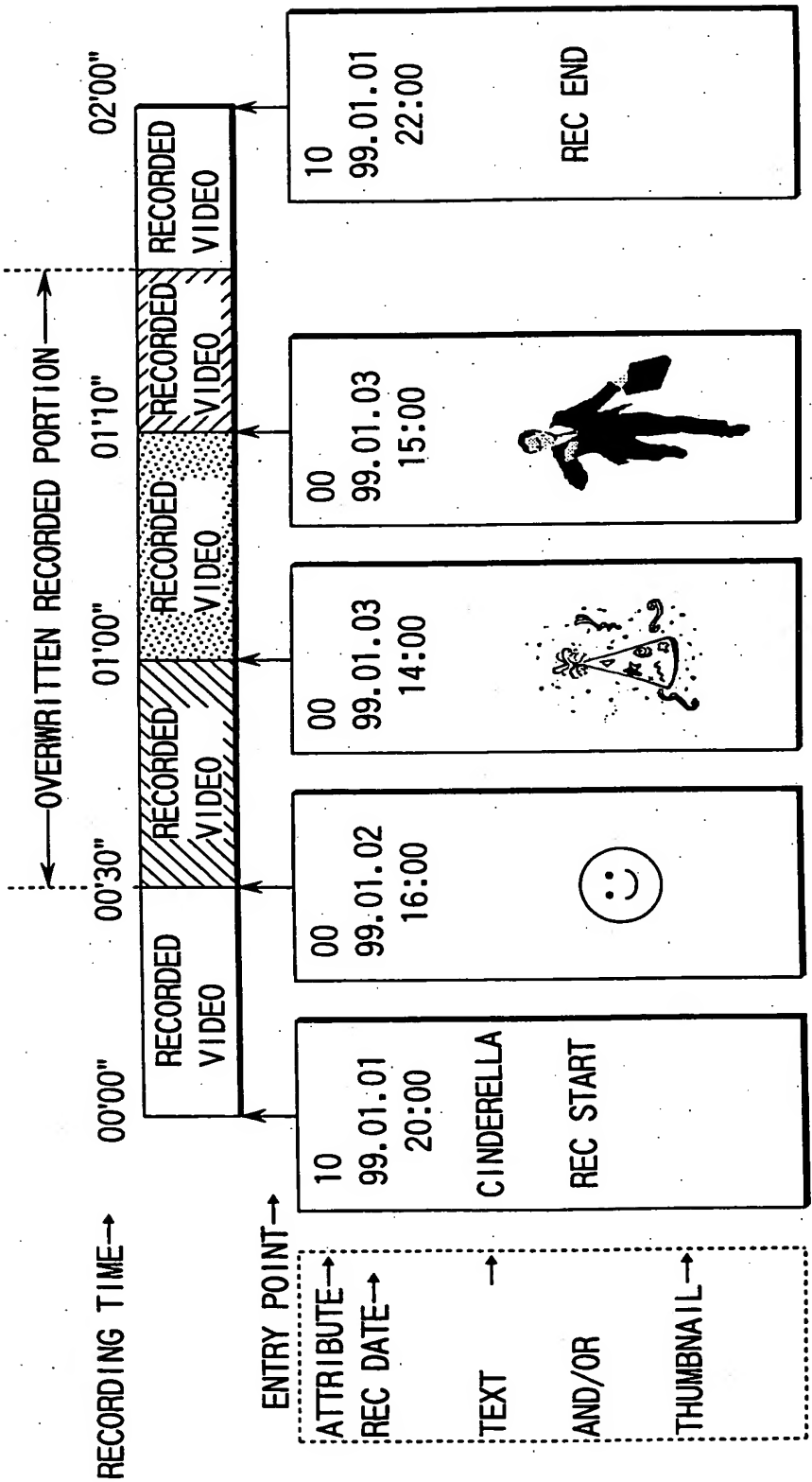

RECORDING TIME
00'00"
00'30"
01'00"
01'10"
02'00"
OVERWRITTEN RECORDED PORTION
RECORDED VIDEO
ENTRY POINT
ATTRIBUTE
REC DATE
TEXT
AND/OR
THUMBNAIL
10
99.01.01
20:00
CINDERELLA
REC START
00
99.01.02
16:00
00
99.01.03
14:00
00
99.01.03
15:00
10
99.01.01
22:00
REC END

FIG. 36

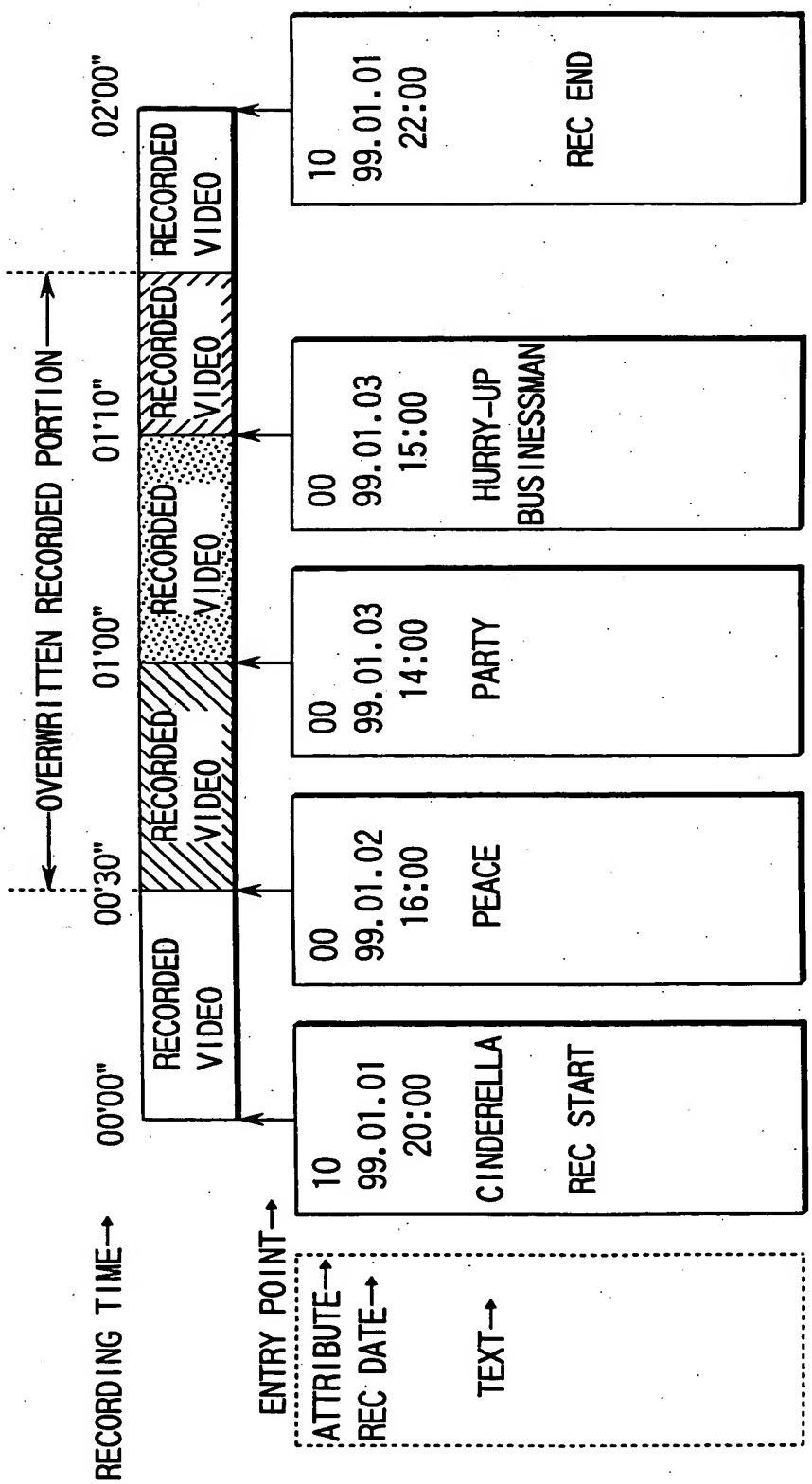

RECORDING TIME→
00'00"
00'30"
01'00"
01'10"
02'00"
OVERWRITTEN RECORDED PORTION
RECORDED VIDEO
RECORDED VIDEO
RECORDED VIDEO
RECORDED VIDEO
ENTRY POINT→
ATTRIBUTE→
REC DATE→
TEXT→
10
99.01.01
20:00
CINDERELLA
REC START
00
99.01.02
16:00
PEACE
00
99.01.03
14:00
PARTY
00
99.01.03
15:00
HURRY-UP
BUSINESSMAN
10
99.01.01
22:00
REC END

FIG. 37

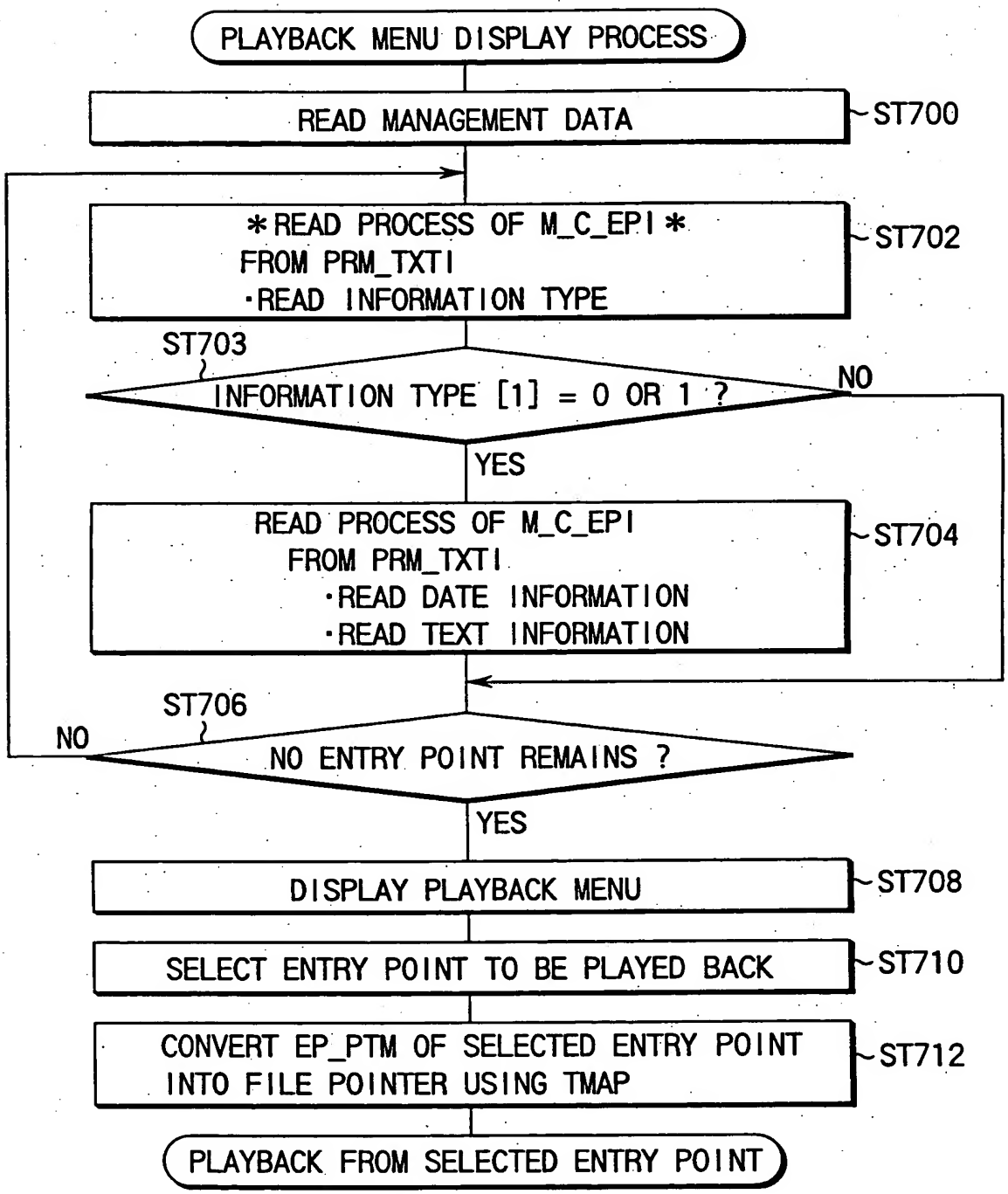

PLAYBACK MENU DISPLAY PROCESS
READ MANAGEMENT DATA
ST700
READ PROCESS OF M_C_EPI
FROM PRM_TXTI
·READ INFORMATION TYPE
ST702
ST703
INFORMATION TYPE [1] = 0 OR 1 ?
NO
YES
READ PROCESS OF M_C_EPI
FROM PRM_TXTI
·READ DATE INFORMATION
·READ TEXT INFORMATION
ST704
ST706
NO
NO ENTRY POINT REMAINS ?
YES
DISPLAY PLAYBACK MENU
ST708
SELECT ENTRY POINT TO BE PLAYED BACK
ST710
CONVERT EP_PTM OF SELECTED ENTRY POINT
INTO FILE POINTER USING TMAP
ST712
PLAYBACK FROM SELECTED ENTRY POINT

FIG. 38

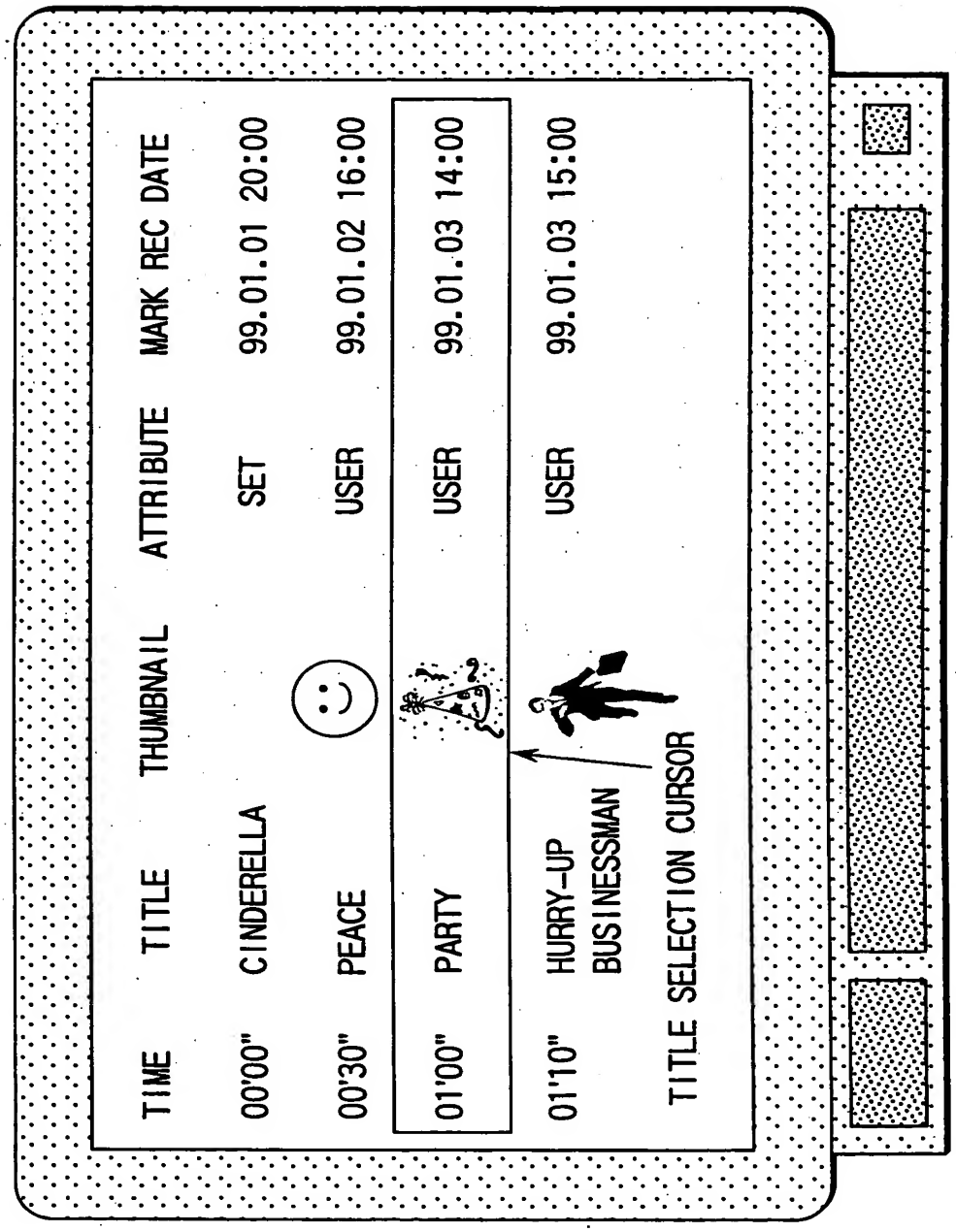

TIME
TITLE
THUMBNAIL
ATTRIBUTE
MARK REC DATE
00'00"
CINDERELLA
SET
99.01.01 20:00
00'30"
PEACE
USER
99.01.02 16:00
01'00"
PARTY
USER
99.01.03 14:00
01'10"
HURRY-UP BUSINESSMAN
USER
99.01.03 15:00
TITLE SELECTION CURSOR

FIG. 39

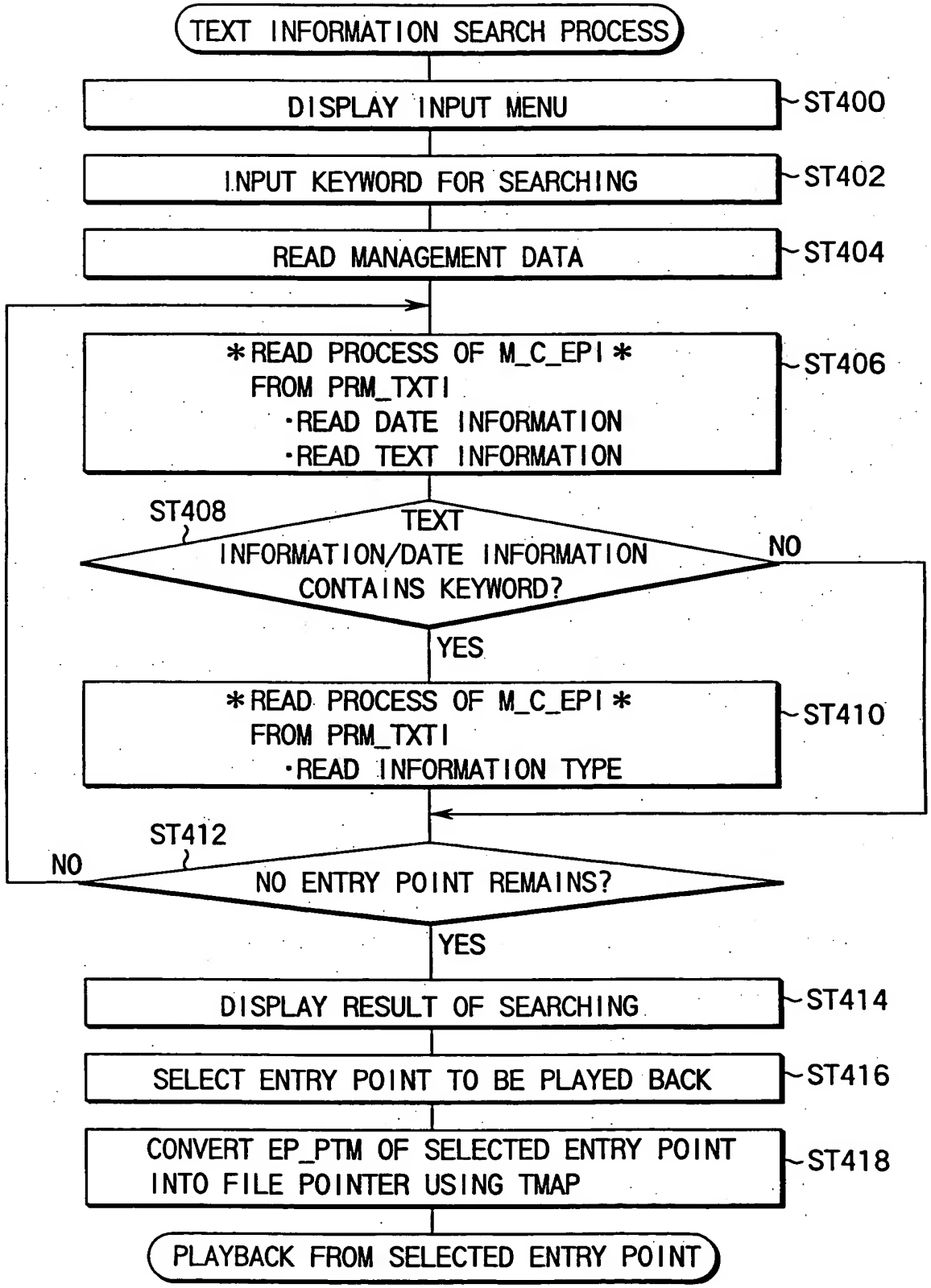

TEXT INFORMATION SEARCH PROCESS
DISPLAY INPUT MENU
ST400
INPUT KEYWORD FOR SEARCHING
ST402
READ MANAGEMENT DATA
ST404
READ PROCESS OF M_C_EPI
FROM PRM_TXTI
·READ DATE INFORMATION
·READ TEXT INFORMATION
ST406
ST408
TEXT INFORMATION/DATE INFORMATION CONTAINS KEYWORD?
NO
YES
READ PROCESS OF M_C_EPI
FROM PRM_TXTI
·READ INFORMATION TYPE
ST410
ST412
NO
NO ENTRY POINT REMAINS?
YES
DISPLAY RESULT OF SEARCHING
ST414
SELECT ENTRY POINT TO BE PLAYED BACK
ST416
CONVERT EP_PTM OF SELECTED ENTRY POINT INTO FILE POINTER USING TMAP
ST418
PLAYBACK FROM SELECTED ENTRY POINT

FIG. 40

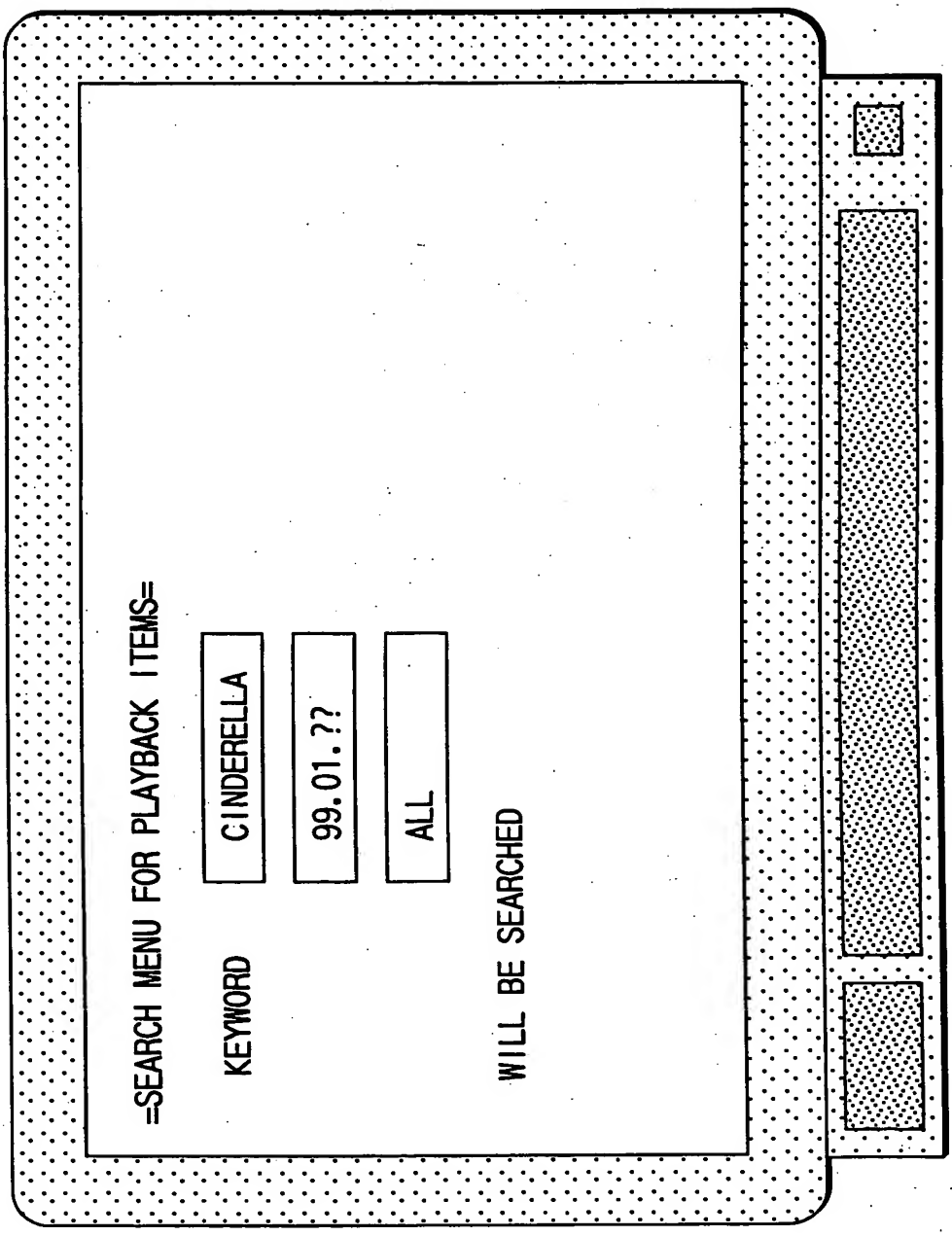

=SEARCH MENU FOR PLAYBACK ITEMS=
KEYWORD
CINDERELLA
99.01.??
ALL
WILL BE SEARCHED

FIG. 41

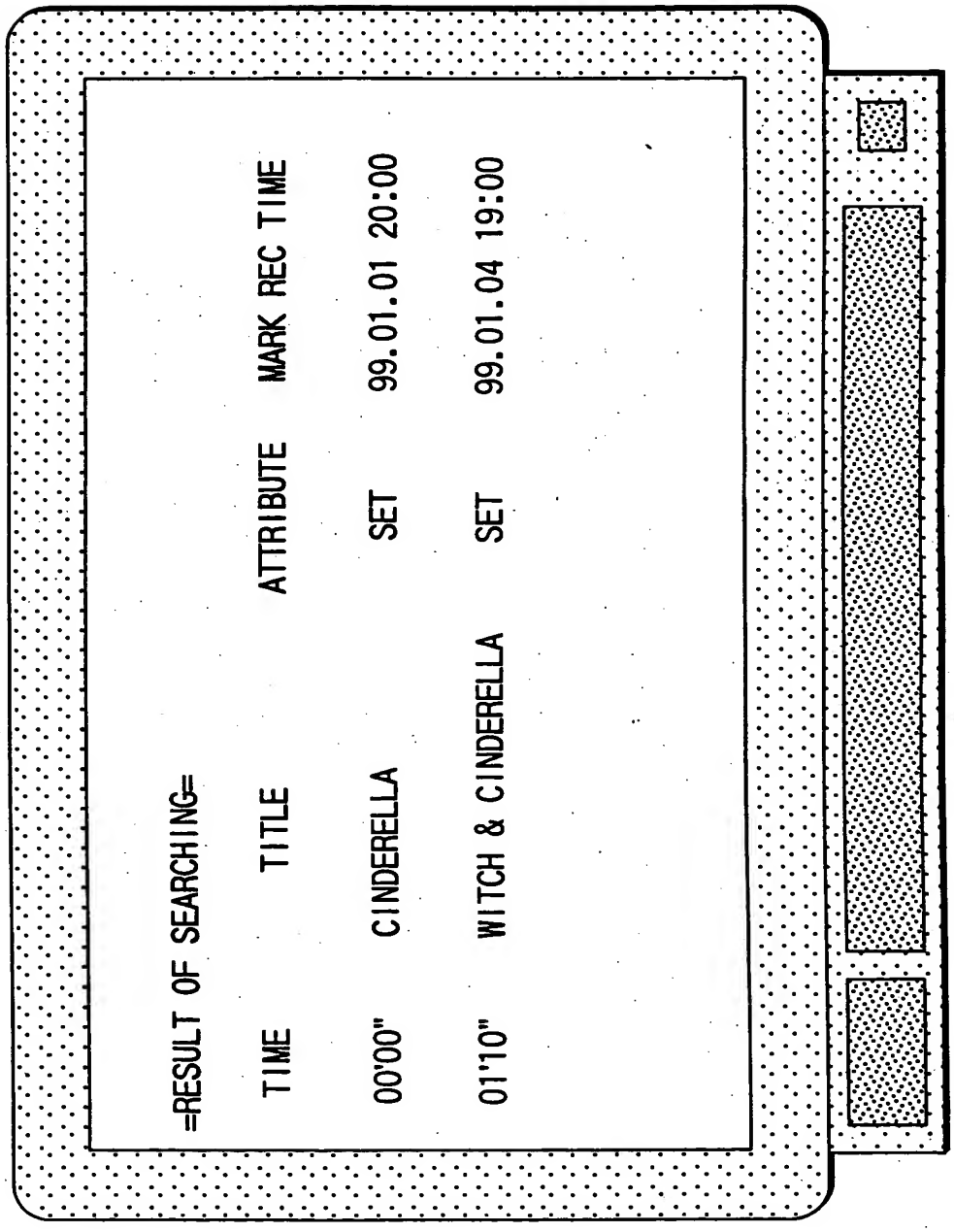

=RESULT OF SEARCHING=
TIME
TITLE
ATTRIBUTE
MARK REC TIME
00'00"
CINDERELLA
SET
99.01.01 20:00
01'10"
WITCH & CINDERELLA
SET
99.01.04 19:00

FIG. 42

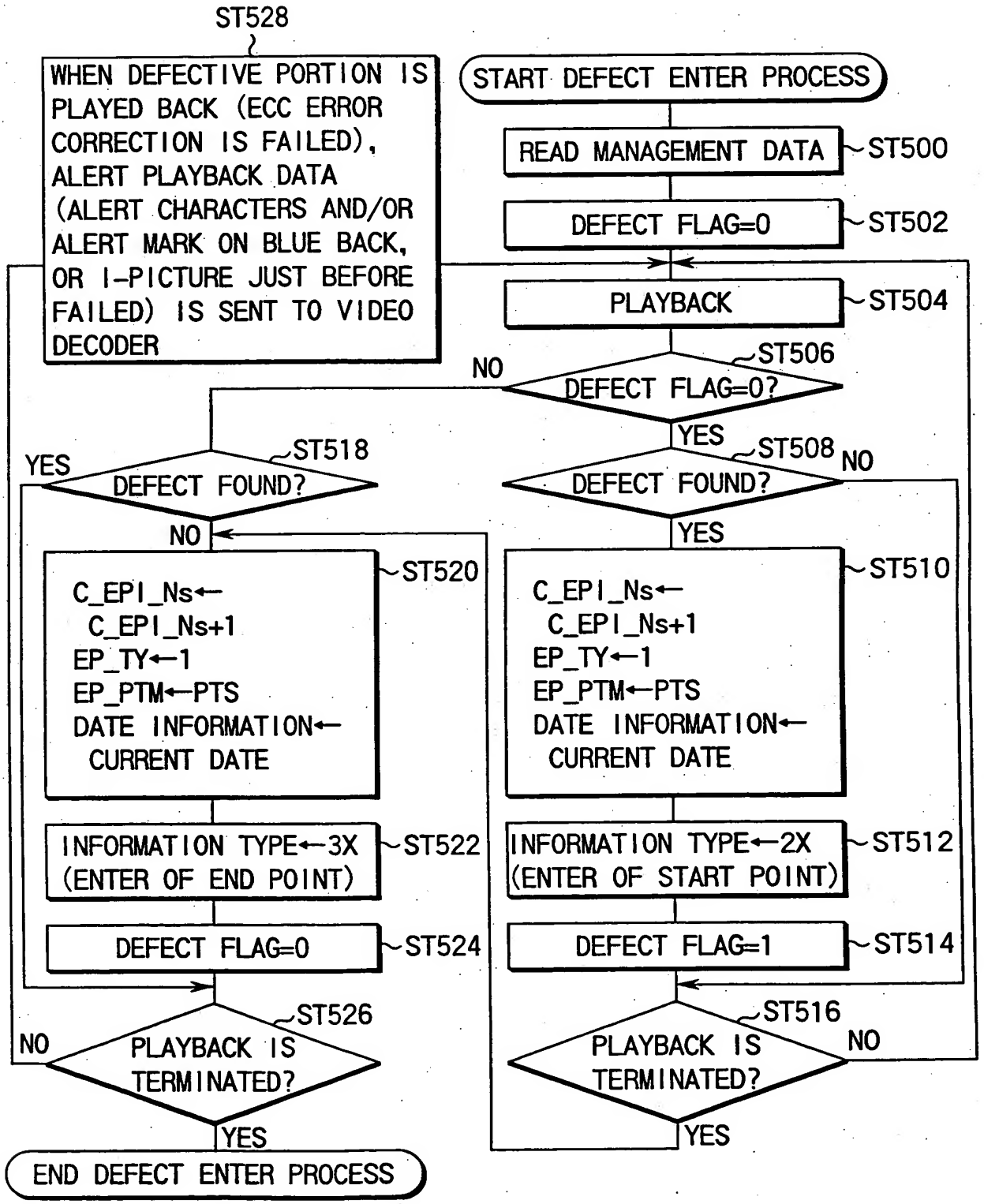

START DEFECT ENTER PROCESS
READ MANAGEMENT DATA
ST500
DEFECT FLAG=0
ST502
PLAYBACK
ST504
DEFECT FLAG=0?
ST506
NO
YES
DEFECT FOUND?
ST508
NO
YES
C_EPI_Ns←
C_EPI_Ns+1
EP_TY←1
EP_PTM←PTS
DATE INFORMATION←
CURRENT DATE
ST510
INFORMATION TYPE←2X
(ENTER OF START POINT)
ST512
DEFECT FLAG=1
ST514
PLAYBACK IS
TERMINATED?
ST516
NO
YES
WHEN DEFECTIVE PORTION IS
PLAYED BACK (ECC ERROR
CORRECTION IS FAILED),
ALERT PLAYBACK DATA
(ALERT CHARACTERS AND/OR
ALERT MARK ON BLUE BACK,
OR I-PICTURE JUST BEFORE
FAILED) IS SENT TO VIDEO
DECODER
ST528
DEFECT FOUND?
ST518
YES
NO
C_EPI_Ns←
C_EPI_Ns+1
EP_TY←1
EP_PTM←PTS
DATE INFORMATION←
CURRENT DATE
ST520
INFORMATION TYPE←3X
(ENTER OF END POINT)
ST522
DEFECT FLAG=0
ST524
PLAYBACK IS
TERMINATED?
ST526
NO
YES
END DEFECT ENTER PROCESS

FIG. 43

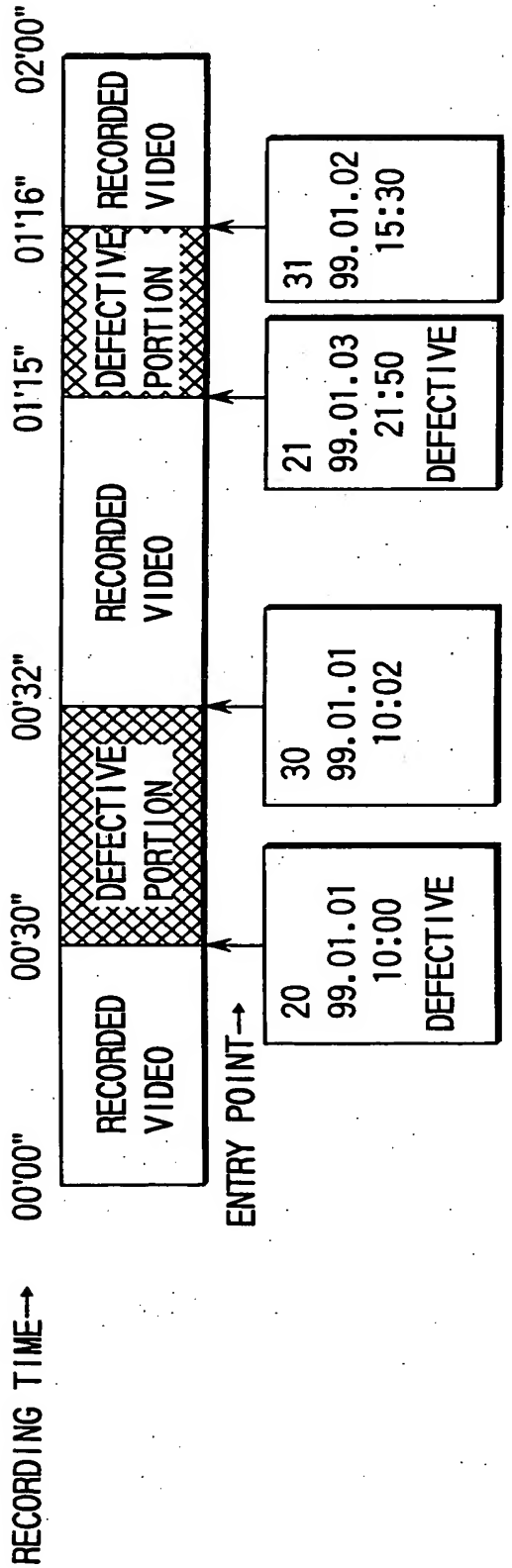

RECORDING TIME→
00'00"
00'30"
00'32"
01'15"
01'16"
02'00"
RECORDED VIDEO
DEFECTIVE PORTION
RECORDED VIDEO
DEFECTIVE PORTION XXXXXXXX
RECORDED VIDEO
ENTRY POINT→
20
99.01.01
10:00
DEFECTIVE
30
99.01.01
10:02
21
99.01.03
21:50
DEFECTIVE
31
99.01.02
15:30

FIG. 44

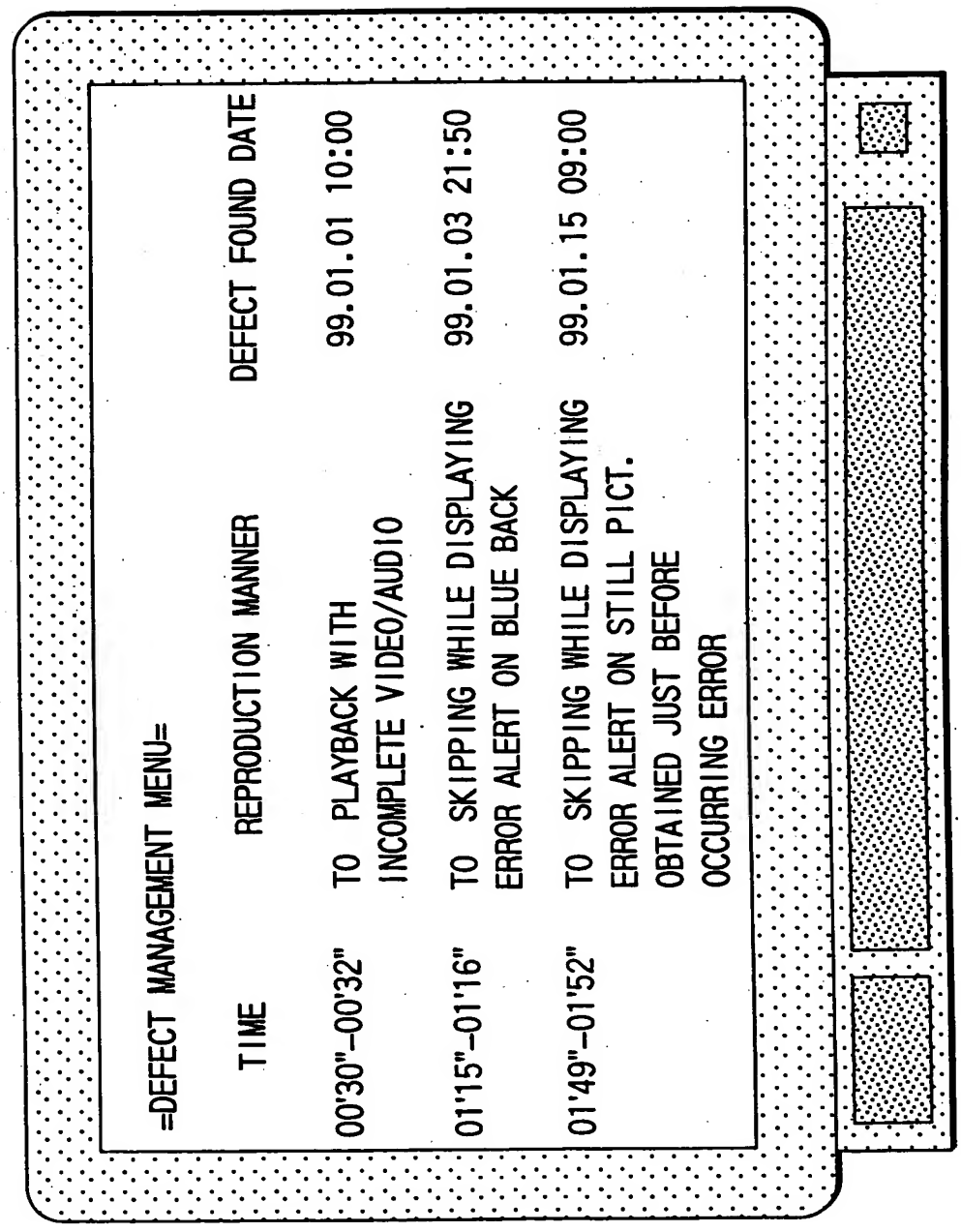

=DEFECT MANAGEMENT MENU=
TIME
REPRODUCTION MANNER
DEFECT FOUND DATE
00'30"–00'32"
TO PLAYBACK WITH INCOMPLETE VIDEO/AUDIO
99.01.01 10:00
01'15"–01'16"
TO SKIPPING WHILE DISPLAYING ERROR ALERT ON BLUE BACK
99.01.03 21:50
01'49"–01'52"
TO SKIPPING WHILE DISPLAYING ERROR ALERT ON STILL PICT. OBTAINED JUST BEFORE OCCURRING ERROR
99.01.15 09:00

FIG. 45

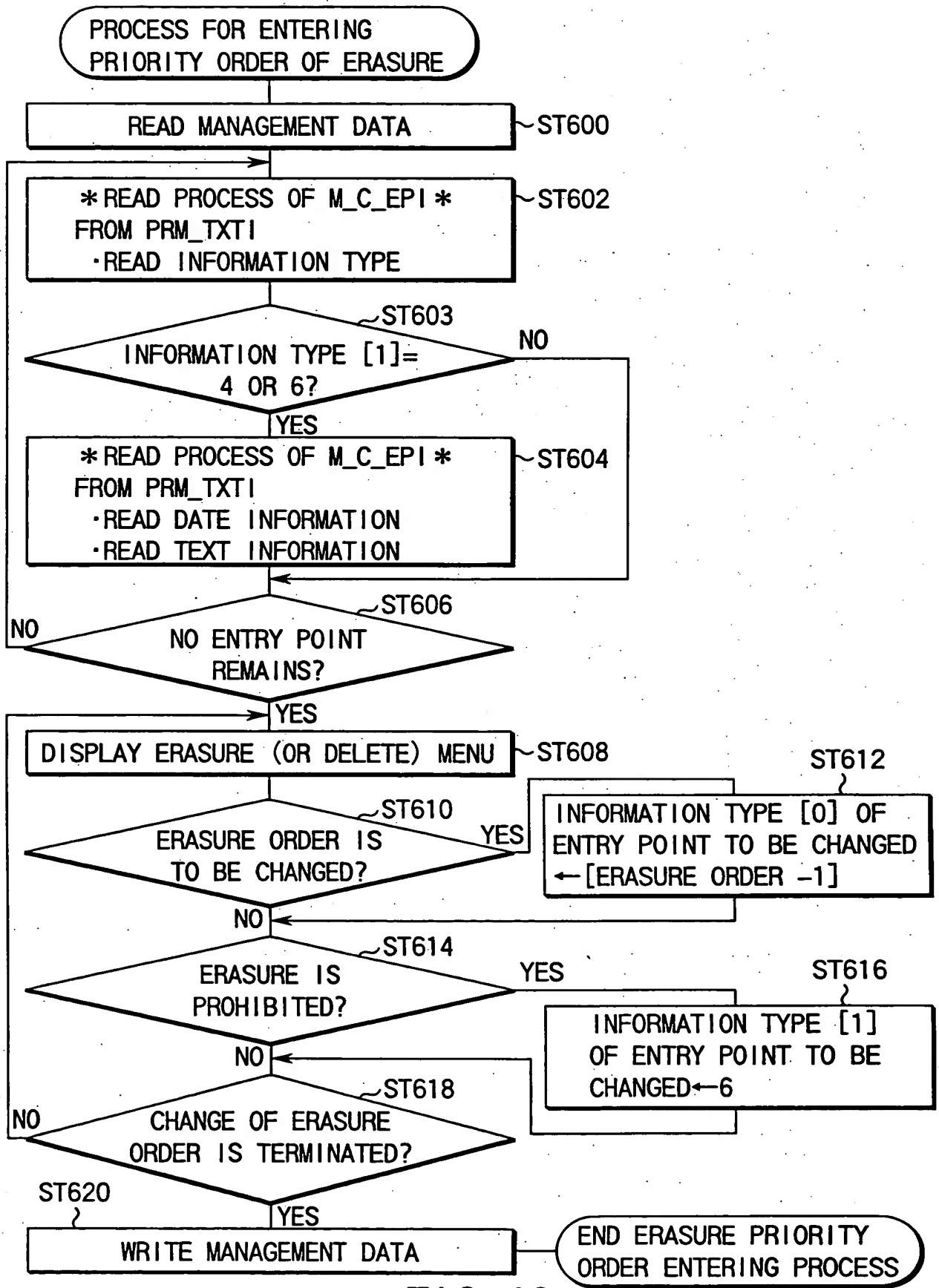

PROCESS FOR ENTERING PRIORITY ORDER OF ERASURE
READ MANAGEMENT DATA
ST600
READ PROCESS OF M_C_EPI
FROM PRM_TXTI
·READ INFORMATION TYPE
ST602
ST603
INFORMATION TYPE [1]= 4 OR 6?
NO
YES
READ PROCESS OF M_C_EPI
FROM PRM_TXTI
·READ DATE INFORMATION
·READ TEXT INFORMATION
ST604
ST606
NO ENTRY POINT REMAINS?
NO
YES
DISPLAY ERASURE (OR DELETE) MENU
ST608
ST610
ERASURE ORDER IS TO BE CHANGED?
YES
ST612
INFORMATION TYPE [0] OF ENTRY POINT TO BE CHANGED ←[ERASURE ORDER -1]
NO
ST614
ERASURE IS PROHIBITED?
YES
ST616
INFORMATION TYPE [1] OF ENTRY POINT TO BE CHANGED←6
NO
ST618
CHANGE OF ERASURE ORDER IS TERMINATED?
NO
YES
ST620
WRITE MANAGEMENT DATA
END ERASURE PRIORITY ORDER ENTERING PROCESS

FIG. 46

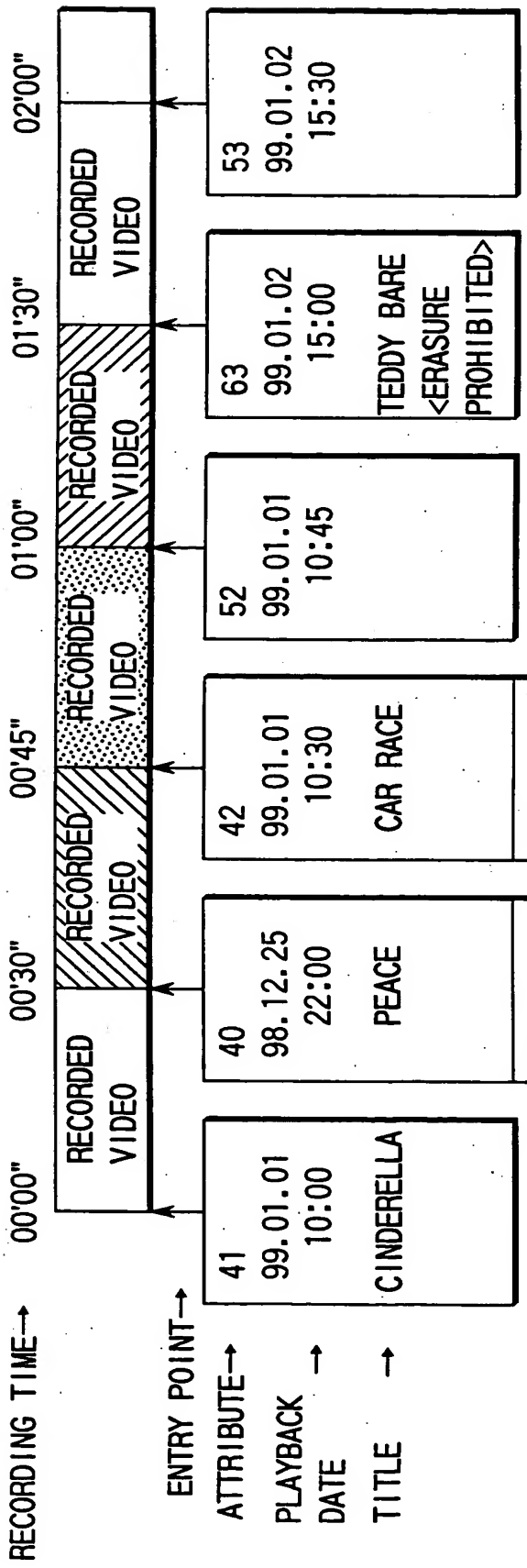

RECORDING TIME→
00'00"
00'30"
00'45"
01'00"
01'30"
02'00"
ENTRY POINT→
ATTRIBUTE→
PLAYBACK DATE →
TITLE →
RECORDED VIDEO
RECORDED VIDEO
RECORDED VIDEO
RECORDED VIDEO
RECORDED VIDEO
41
99.01.01
10:00
CINDERELLA
40
98.12.25
22:00
PEACE
51
99.01.01
10:30
42
99.01.01
10:30
CAR RACE
50
98.12.25
22:15
52
99.01.01
10:45
63
99.01.02
15:00
TEDDY BARE
<ERASURE PROHIBITED>
53
99.01.02
15:30

FIG. 47

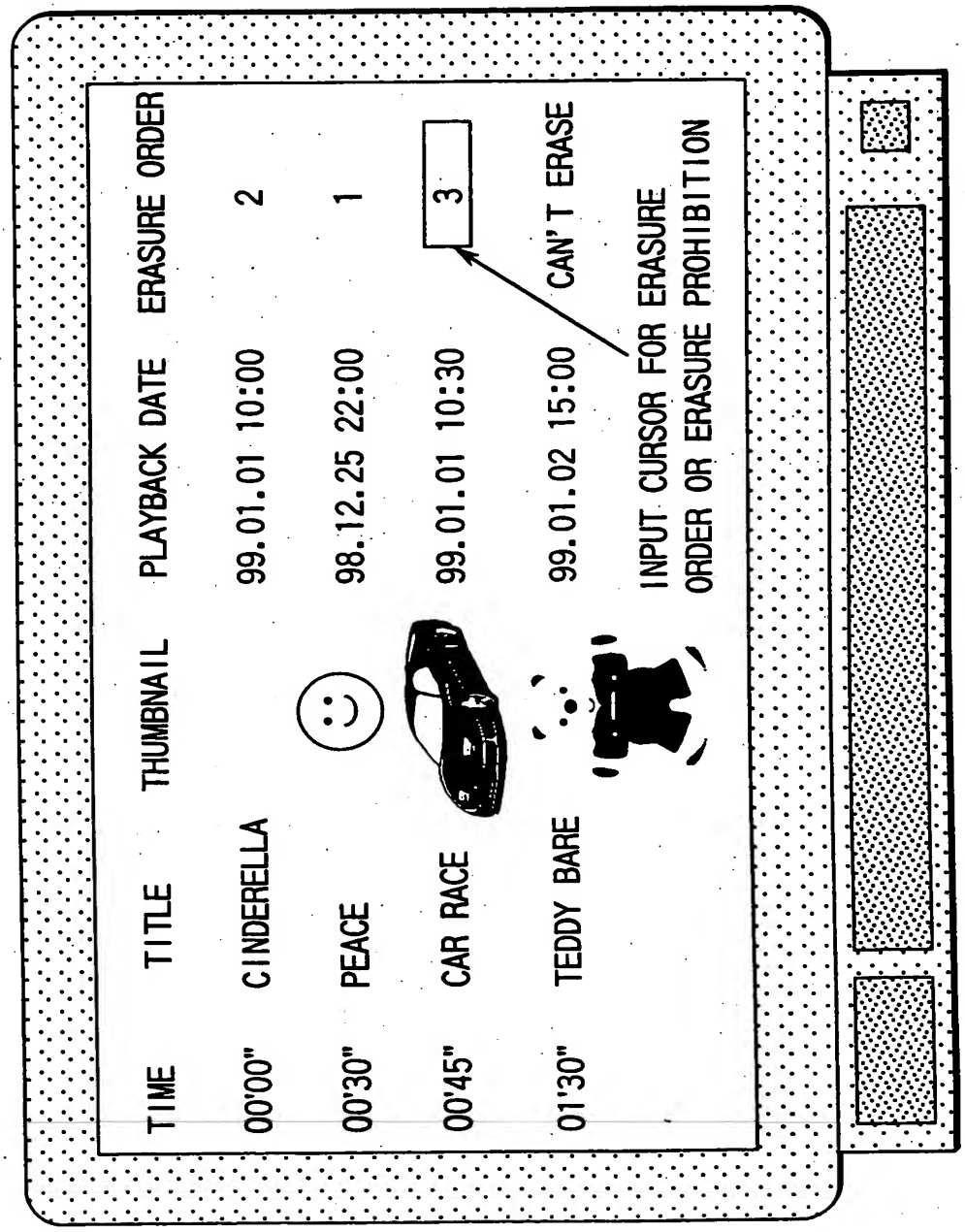
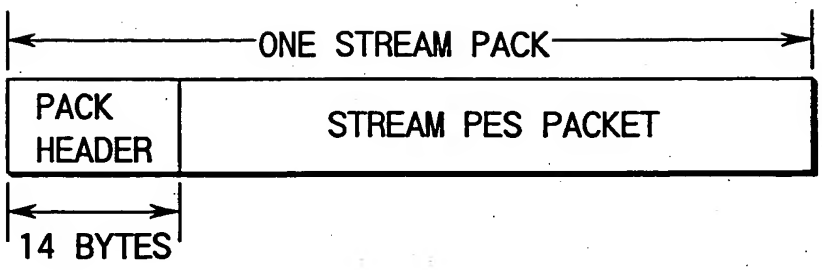

TIME
TITLE
THUMBNAIL
PLAYBACK DATE
ERASURE ORDER
00'00"
CINDERELLA
99.01.01 10:00
2
00'30"
PEACE
98.12.25 22:00
1
00'45"
CAR RACE
99.01.01 10:30
3
01'30"
TEDDY BARE
99.01.02 15:00
CAN'T ERASE
INPUT CURSOR FOR ERASURE
ORDER OR ERASURE PROHIBITION

FIG. 48

FIG. 49


ONE STREAM PACK
PACK HEADER
STREAM PES PACKET
14 BYTES

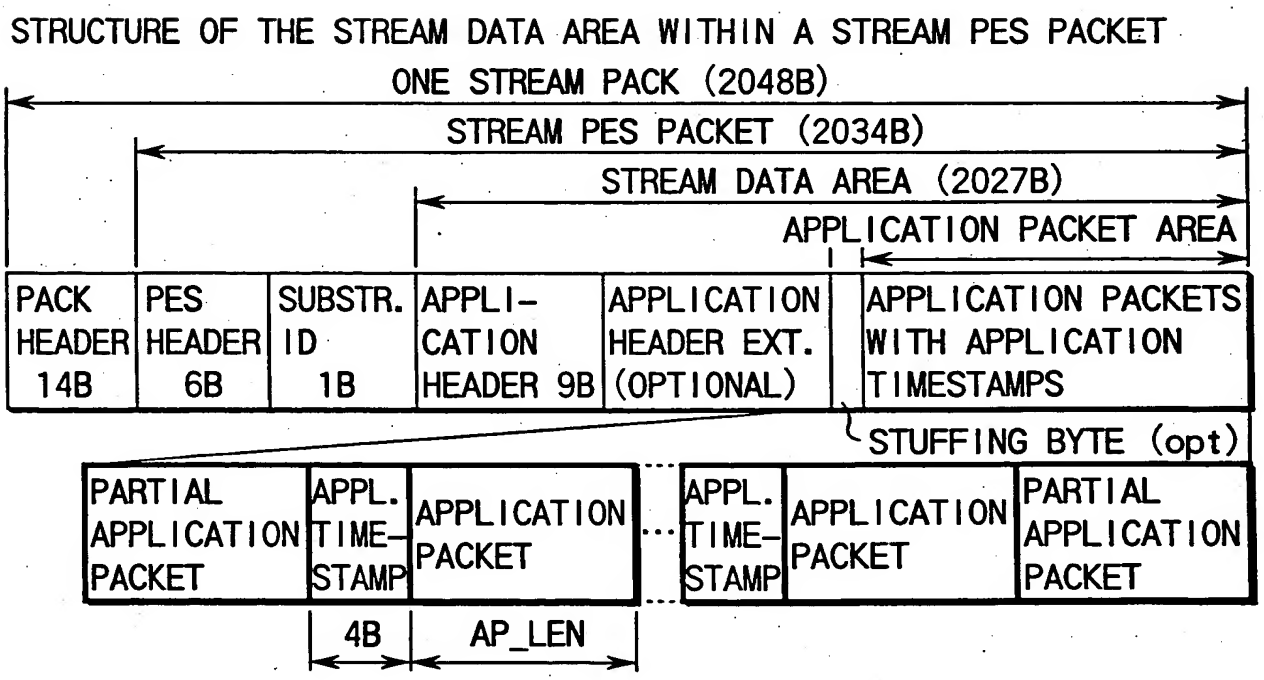

STRUCTURE OF THE STREAM DATA AREA WITHIN A STREAM PES PACKET
ONE STREAM PACK (2048B)
STREAM PES PACKET (2034B)
STREAM DATA AREA (2027B)
APPLICATION PACKET AREA
PACK HEADER 14B
PES HEADER 6B
SUBSTR. ID 1B
APPLI-CATION HEADER 9B
APPLICATION HEADER EXT. (OPTIONAL)
APPLICATION PACKETS WITH APPLICATION TIMESTAMPS
STUFFING BYTE (opt)
PARTIAL APPLICATION PACKET
APPL. TIME-STAMP
APPLICATION PACKET
APPL. TIME-STAMP
APPLICATION PACKET
PARTIAL APPLICATION PACKET
4B
AP_LEN

FIG. 50

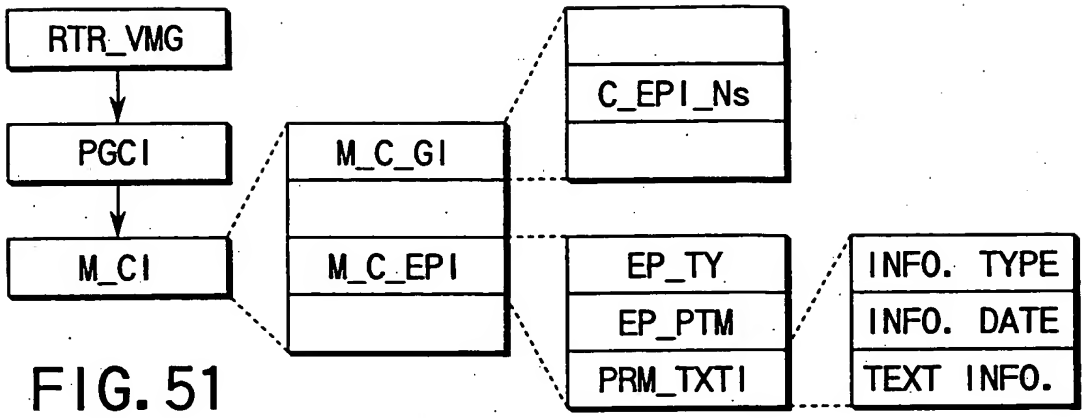


FIG. 51

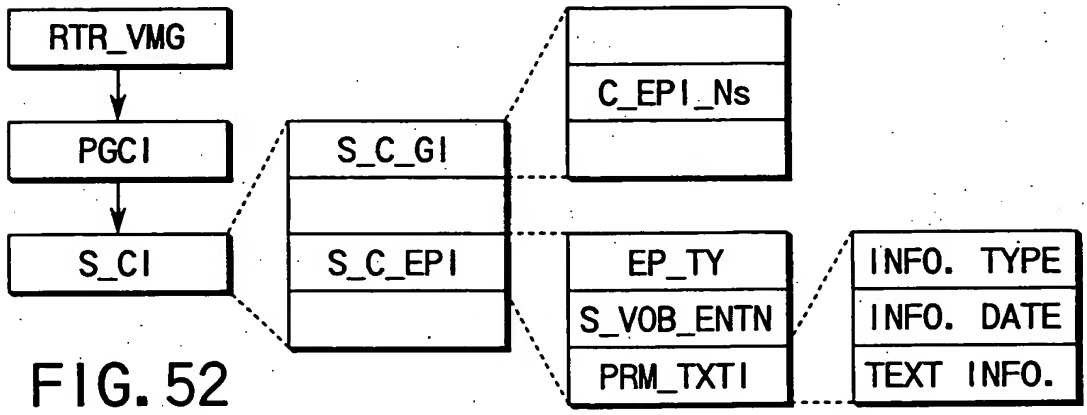


FIG. 52

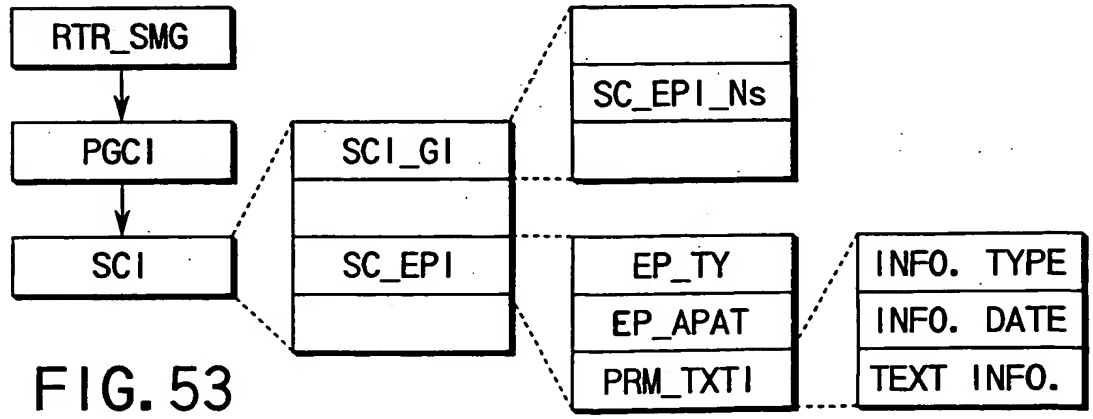


FIG. 53